



## U.S. Department of Energy National Energy Technology Laboratory

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Pittsburgh, PA 15236-0940

# NETL

*We Solve National Energy  
and Environmental Problems*

February 23, 2000

### EXECUTIVE SUMMARY LETTER

TO: ALL PROSPECTIVE APPLICANTS

SUBJECT: PROGRAM SOLICITATION FOR FINANCIAL ASSISTANCE APPLICATIONS FOR "BIOMASS COFIRING OPPORTUNITIES," SOLICITATION NUMBER DE-PS26-00NT40775

The purpose of this executive summary letter is to highlight some important elements of the Program Solicitation. This letter is not an integral part of the solicitation. The solicitation is a self-contained document. In the event of any conflict between the contents of this executive summary letter and the contents of the solicitation, the solicitation language will prevail.

The objective of this effort is to solicit cost-shared applications for research and development that seek to develop technologies for cofiring biomass feedstocks with fossil fuels.

Biomass co-firing is the practice of substituting biomass (generally in the range of 5% - 20% by weight) for fossil fuels (i.e., coal or natural gas) in utility or industrial boilers. Cofiring biomass is one of the few viable, low-cost option for dramatically increasing the generation of biomass power in the United States.

The DOE Cofiring Program, to date, has focused mainly on demonstrating cofiring plant-derived biomass in pulverized coal and cyclone boilers. Several successful test campaigns have generated data for some systems that could be useful in determining if cofiring is feasible. **Based on prior successful results, the DOE Biomass Cofiring Program seeks to expand the investigation of biomass cofiring with the aim of demonstrating the cost-effective and sustained usage of biomass.**

The program seeks to sponsor both Budget Period I: Feasibility Studies and Small-Scale Research, with an anticipated duration of 12 months, and Budget Period II: Limited Term Cofiring Demonstrations Phase, with an anticipated duration of 24-30 months, on the following topics:

- A Biomass Cofiring as an Emission Reduction Technique
- B Gasification-Based Cofiring Strategies
- C Closed-Loop Biomass Cofiring
- D Low Rank Coal Cofiring - Subbituminous & Lignite

The program will only sponsor Budget Period I: Feasibility Studies and Small-Scale Research activities on the following topic:

- E University and Colleges Cofiring Applications

The solicitation is divided into seven (7) sections as follows (The sample award document is contained in Sections I-IV):

- |             |   |
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| Section II  | Special Terms and Conditions                  |
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Section VI	Application Preparation Instructions
Section VII	Evaluation and Selection

Each application will be objectively reviewed on its own merit against the evaluation criteria stated in Section VII using technical, scientific and/or peer reviewers, some of whom may be non-Governmental personnel. Should an Applicant object to review of their application by individuals other than Government employees it shall so state in Volume I of its application. Applicants are, however, cautioned that the DOE may be unable to give full consideration to applications which indicate that only Government evaluation is authorized.

Individuals, corporations, nonprofit organizations, small and small disadvantaged businesses, educational institutions, and state or local governments or other entities who wish to have an application evaluated should respond to the requirements of this solicitation.

The Government anticipates 2-4 awards in each of the Topics A, B, C, and D with each in the form of Financial Assistance -Cost Sharing Cooperative Agreements. The Government anticipates 8 - 10 awards for Topic E in the form of Cost Sharing Grants for Topic E, but reserves the right to award the type of agreement deemed in its best interest. Based upon a restricted eligibility determination, awards selected under Topic E are limited to U. S. universities, colleges, and university-affiliated research institutions.

Estimated project costs are \$ 1.0 M to \$3.0 M each for projects in Topics A, C, and D. Topic B has an estimated range of project costs of \$ 1.5 M to \$9.0 M each. Topic E has an estimated cost of \$100,000 to \$150,000 per project. The range of projects and upper limits were estimated taken into account the level and technology area of the Topic. DOE funding for the projects will be based upon the cost-share levels detailed in the following paragraph. Projects are estimated to have a duration of 12 to 42 months depending on the Budget Periods proposed.

Cost-Share: Offerors are advised that a mandatory minimum cost-share of 20% for Budget Period I and 50% minimum cost-share for Budget Period II is required. Topic E is only a Budget Period I project and will require 20% cost-sharing. If, during the preliminary application review, it is found that the Applicant does not satisfy the cost share requirement as set forth in the solicitation, the application will not be comprehensively reviewed and thus shall not be considered for an award.

The Government does not anticipate providing any facilities or property for accomplishing this effort. Applicants are encouraged to propose utilization of existing facilities and make allowance for providing all necessary personnel, facilities, and materials to complete the proposed activity. Applications must be submitted in accordance with the requirements of the solicitation preparation instructions in Section VI. Applicants are also advised to give particular attention to the evaluation criteria identified in Section VII. Each of the required application parts should be bound separately and clearly labeled. The applications must be received by the Contract Specialist not later than 4:00 p.m. local prevailing time on **April 4, 2000**, at the address below:

U.S. Department of Energy  
National Energy Technology Laboratory  
ATTN: Dona Sheehan  
P. O. Box 10940, MS921-107  
Pittsburgh, PA 15236-0940  
Email: sheehan@netl.doe.gov

Applications must authorize a period for acceptance by the Government of not less than one hundred eighty (180) calendar days from the date specified for receipt of applications.

All requests for explanation or interpretation of any part of the solicitation shall be submitted in writing, via mail or e-mail to the Contract Specialist at the aforementioned address. Your written questions must be received by the Contract Specialist within 15 calendar days prior to the due date for submission of applications to allow sufficient time for a reply to reach all prospective applicants before the submission of their application. The Government reserves the right not to respond to questions submitted after this period. In the event it is necessary to amend the solicitation as a result of a request for explanation or interpretation, the amendment will contain both, the question and answer, without reference to the originating sources. All amendments will be posted on the NETL Homepage at "<http://www.netl.doe.gov/business/solicit/>"; therefore, applicants are encouraged to periodically check the NETL Homepage to ascertain the status of any amendments as hard copies will not be distributed.

For your information, it is recommended that all prospective applicants' download a copy of the DOE "Lobbying Brochure" (<http://www.pr.doe.gov/lobbying.html>) which provides a summary of the statutory and regulatory restrictions regarding lobbying activities for Federal contractors and recipients.

Please note that an automated document writing system has been used to prepare this document. Each provision in the data base has been assigned a number. Not all of the provisions in the data base have been used in this document; therefore, the numbering may not be continuous. Blanks areas appearing in the solicitation, indicated by "[TBD]" or "[To Be Determined]" will be completed after negotiations.

All communications concerning this solicitation should cite the Program Solicitation number (DE-PS26-00NT40775) and be directed in writing to the attention of the undersigned via mail or E-mail at the above address.

Sincerely,

Dona G. Sheehan  
Contract Specialist  
Acquisition and Assistance Division



**U.S. Department of Energy**  
**National Energy Technology Laboratory**

3610 Collins Ferry Road  
P.O. Box 880  
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**NETL**

*We Solve National Energy  
and Environmental Problems*

**PROGRAM SOLICITATION**

**DE-PS26-00NT40075**

**BIOMASS COFIRING OPPORTUNITIES**

**ISSUANCE DATE: FEBRUARY 23, 2000**

**CLOSING DATE: APRIL 4, 2000**  
**4:00 p.m. est.**

**Point of Contact: Dona G. Sheehan**  
**Acquisition & Assistance Division**  
**U. S. DOE, NETL**  
**P. O. Box 10940, MS 921-107**  
**Pittsburgh, PA 15236-0940**

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**SEE SECTION 5.13 FOR ADDRESS FOR SUBMISSION OF OFFERS TO THE DOE**

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**Program Solicitation (PS)**  
**Solicitation # DE-PS26-00NT40775**  
**“Biomass Cofiring Opportunities”**

**1.1 SUMMARY (JAN 2000)**

The Office of Biopower and Hydropower Technologies of the Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) has authorized DOE's National Energy Technology Lab (NETL) to act on its behalf in competitively soliciting cost-shared applications for research and development that seek to develop technologies for cofiring biomass feedstocks with fossil fuels.

**1.2 BACKGROUND INFORMATION (JAN 2000)**

Biomass co-firing is the practice of substituting 5% - 20% biomass (by weight) for fossil fuels (i.e., coal or natural gas) in utility or industrial boilers. Cofiring biomass is one of the few viable, low-cost options for dramatically increasing the generation of biomass power in the United States. The DOE is pursuing the development of fossil fuel/biomass co-firing energy systems for several reasons:

Biomass cofiring is an attractive way to utilize existing (coal and natural gas) power plants to increase the efficiency of biomass use and reduce overall costs.

The use of current fossil-fueled systems provides readily available access to the current electricity market.

Biomass is an available domestic resource and can contribute to energy security.

Biomass is considered CO<sub>2</sub> neutral, cofiring serves to reduce greenhouse gas emissions.

Biomass is renewable and its use promotes sustainability and local economic growth.

Biomass cofiring offers the potential to reduce fossil SO<sub>2</sub> and NO<sub>x</sub> emissions.

Landfill burdens are reduced when waste biomass is utilized as the cofiring fuel.

The DOE Biomass Cofiring Program, to date, has focused mainly on demonstrating cofiring plant-derived biomass in pulverized coal and cyclone boilers. Several successful test campaigns have generated data for some systems that could be useful in determining if cofiring is feasible.

**1.3 SOLICITATION OBJECTIVES (JAN 2000)**

Based on prior successful results, the DOE Biomass Cofiring Program seeks to expand the investigation of biomass cofiring with the aim of demonstrating the cost-effective and sustained usage of biomass.

It is anticipated that multiple financial assistance awards, Cooperative Agreements/Grants, will result from this solicitation. Subject to availability of funds, DOE expects to provide funds totaling \$18-22 million. Project period duration and cost-sharing requirements are given below.

The program seeks to sponsor both Budget Period I: Feasibility Studies and Small-Scale Research, with an anticipated duration of 12 months, and Budget Period II: Limited Term Cofiring Demonstrations Phase, with an anticipated duration of 24-30 months, on the following topics:

**1.4 PROGRAM TOPICS OF INTEREST**

*Reference note at end of section 1.4 for common definitions and restricted materials.*

## **A. Biomass Cofiring as Emission Reduction Technique**

This focus area attempts to capitalize on the benefits of biomass as an emission (i.e. SO<sub>x</sub>, NO<sub>x</sub>, and/or CO<sub>2</sub>) reduction fuel. Previous research projects have dealt with cofiring in pulverized coal and cyclone boilers in a range of around 5-20 % by mass. Cofiring has the potential to help reduce emissions and increase the usage of biomass in numerous situations. Some of these may include for example utilizing biomass as a reburn fuel to control NO<sub>x</sub> (replace natural gas) thereby taking advantage of the volatility of the fuel, and other potentially novel cofiring arrangements such as the use designer fuels. This topic deals with emission reduction demonstrations. These demonstrations generally will utilize "open-loop" feedstock supplies and should be more than just demonstrating a cofiring of wood/wood-waste with coal.

Designer fuel blends or opportunity fuel blends can be developed from mixtures of biomass with coal and additional components that complement each other as far as costs and emission reduction potentials. Designer fuels have the ability to make biomass cofiring cost effective while reducing emissions and/or address an environmental concern. Demonstrations of various designer fuels would increase the potential use of biomass. The designer fuel must contain at least coal and biomass as significant fractions in the mix. Demonstrations are sought that utilize designer fuel or opportunity fuel blends to increase the usage of biomass in the energy mix.

Cofiring has been shown in many instances to reduce NO<sub>x</sub> emissions in cofiring in a pulverized coal, tangentially-fired, or cyclone boiler. Separated Overfire Air (SOFA) has also been shown to work as a NO<sub>x</sub> management strategy. However, by themselves, neither strategy may provide the complete technique required to meet projected EPA regulations. Possible combinations of SOFA and cofiring of biomass at greater than 10% by mass has the potential to achieve the desired 0.15 LB NO<sub>x</sub>/MMBtu emissions in T-fired boilers. Testing this hypothesis in a demonstration may prove the indications valid. If so, the demonstration would open up a very large market for biofuels in the cofiring arena. Further, it would provide a mechanism for coal-fired boilers to achieve the required NO<sub>x</sub> emissions without expensive capital investments in post-combustion controls. As such, it would maintain the economic viability of many PC boilers throughout the U.S. Demonstrations are sought to show significant reductions in NO<sub>x</sub> from a coal-fired boiler utilizing biomass. The reduction in NO<sub>x</sub> must be more than that found in simple fuel substitution of biomass for coal. The demonstration needs to optimize the injection method and location for the biomass and then demonstrate NO<sub>x</sub> management with cofiring on a long-term basis.

The Department of Energy is interested in receiving research applications that develop and demonstrate systems that utilize biomass as an emission reduction technology. This can be accomplished with any one or combination of the previously described methods or with any other demonstration method that meets the goal of emission reduction and biomass utilization. Note: Any project and demonstration proposed must address the issue of why this project is unique and different from other past cofiring projects (i.e. demonstrating biomass/coal cofiring directly).

## **B. Gasification-Based Cofiring Strategies**

This method is an indirect way of utilizing the biomass for cofiring versus the direct utilization of feeding the biomass into the furnace. Likewise, the direct application of cofiring is not amenable to gas-fired systems. Gasification-based strategies can overcome this obstacle as well as being more biomass fuel flexible than a direct cofiring system. Gasification of the biomass and then utilization of the gas produced and possibly any residues from the gasification process in a cofiring application permits a greater range of usage of biomass. This method will also keep the resultant coal and biomass ash from being commingled and thus permit ongoing coal ash sales if currently being conducted.

Applications are sought which address this issue from distinct phases of engineering feasibility to demonstration of the technology. Impacts on the complete system cycle and efficiency must be taken into account.

### **C. Closed-Looped Biomass Co-Firing**

Applications are sought that develop and validate co-firing technology using a "closed-loop" feedstock supply. Respondents are encouraged to form appropriate consortia or other business arrangements with the agricultural community, industry, power producers, or other applicable organizations for the conduct of this venture. This arrangement will demonstrate and foster the efforts required for a sustained, economically beneficial, biomass cofiring power generation.

The applicant should demonstrate an approach to the integration and successful application of a "closed-loop" feedstock supply system and a technically viable co-firing boiler system for power production.

### **D. Low Rank Coal Cofiring - Subbituminous & Lignite**

The DOE has, in the past, cooperated with power producers in testing and analyzing biomass cofiring in coal-fired boilers that use bituminous and some subbituminous coals. However, the program has not tested co-firing biomass in a lignite-fired boiler or extensively demonstrated subbituminous coals. Through this subtopic, the Biomass Cofiring Program intends to add lignite and subbituminous coals to the fossil fuels being demonstrated in other projects. The U.S. has a significant resource base of these fuels. Cofiring of lignite with biomass can be significantly different than cofiring subbituminous or bituminous coals due to the ash chemistry and moisture and other factors. A potentially attractive feature of cofiring biomass with lignite is that the boilers are designed for a fuel with low heat and high moisture content that is consistent with the properties of biomass. As such, DOE is seeking, through this solicitation, to demonstrate the viability of cofiring biomass with lignite or subbituminous coal for application within the fossil-fuel industry.

### **E. University and Colleges Cofiring Applications** (restricted eligibility limited to U. S. universities, colleges, and university-affiliated research institutions)

Cofiring in utility boilers can consume large amounts of biomass and produce power from this fuel source; however, this is also a detriment due to the large-scale nature of the utility. Biomass can become more expensive than the coal that is fired in the boiler if it has to be transported long distances. Due to these economics, it makes cofiring at some electric utilities unfeasible. Comparing fuel costs and quantities of biomass required to cofire, another major market can be identified, that is, the market that has smaller-scale boilers that pay more for their fuel than a large scale utility. These markets would include stokers (paying upwards of twice the cost of coal than that paid at a large utility) and fluidized bed combustors at the heating plants of our nation's colleges and universities. The size of the unit may permit the usage of biomass due to its location within a reasonable transportation distance along with the cost of the current boiler fuel, thus allowing more to be spent on obtaining and transporting the biomass. Fuels may include, but are not limited to, agricultural residues, dedicated crops, animal manures, and segregated MSW from university systems. Many universities and colleges have complimentary departments, such as engineering and agricultural departments, that could collaborate on this issue. Applications are sought from Universities and Colleges that will perform feasibility and small-scale R&D studies in utilizing biomass cofiring in their heating plant.

#### **NOTE: Common Definitions for all Areas**

**Biomass** refers to plant materials and/or animal waste used as a source of fuel.

**Animal Waste** refers to the manure produced and any associated bedding material mixed within the manure and excludes animal processing waste.

**Co-firing** refers to the combustion of biomass and coal (or lignite) for power production.

**Multiple-firing** refers to the combustion of biomass, coal, and one or more additional components that seek to compliment the combustion of the coal and biomass.

**Gasification-Based Cofiring Strategies** refers to the ability to gasify the biomass and utilize the produced gas as a co-fired fuel in either a coal-fired or natural gas-fired boiler or other part of the system for fuel usage.

**Open-loop** refers to operations that utilize biomass from operations that are not specifically set-up for biomass production for the energy application (i.e. sawdust from a saw-mill operation, manure from animal production, etc.).

**Closed-loop** refers to operations that specifically plant, grow, harvest, use, and regrow, at the same production site, any biomass fuel or feedstock in a sustainable, permanent manner that is in whole or in part used for energy application.

**Low-Rank Coal** refers to viability of cofiring biomass with lignite or subbituminous coal for application within the fossil-fuel industry.

**Note:** Unsegregated Municipal Solid Waste (MSW), hazardous waste, and medical waste will not be considered as a cofiring fuel. Segregated MSW is an acceptable cofiring fuel for this solicitation and would include non-recyclable paper and non-treated wood waste. There is no interest in receiving applications for aerobic or anaerobic digesters, landfill gas, or animal gas production.

**1.5 FACE PAGE DOE FORM 4600.1 NOTICE OF FINANCIAL ASSISTANCE AWARD (JAN 1999)**

DOE F 4600.1#

(08/93)

U.S. DEPARTMENT OF ENERGY

**NOTICE OF FINANCIAL ASSISTANCE AWARD***(See Instructions on Reverse)*

Under the authority of Public Law \_\_\_\_\_  
and subject to legislation, regulations and policies applicable to (cite legislative program title): \_\_\_\_\_

1. PROJECT TITLE				2. INSTRUMENT TYPE  <input type="checkbox"/> GRANT <input type="checkbox"/> COOPERATIVE AGREEMENT			
3. RECIPIENT (Name, address, zip code, area code and telephone no.)				4. INSTRUMENT NO.		5. AMENDMENT NO.	
				6. BUDGET PERIOD FROM:      THRU:		7. PROJECT PERIOD FROM:      THRU:	
8. RECIPIENT PROJECT DIRECTOR (Name and telephone no.)				10. TYPE OF AWARD  <input type="checkbox"/> NEW <input type="checkbox"/> CONTINUATION <input type="checkbox"/> RENEWAL  <input type="checkbox"/> REVISION <input type="checkbox"/> SUPPLEMENT			
9. RECIPIENT BUSINESS OFFICER (Name and telephone no.)							
11. DOE PROJECT OFFICER (Name, address, zip code, telephone no.)				12. ADMINISTERED FOR DOE BY (Name, address, zip code, telephone no.)			
13. RECIPIENT TYPE  <div style="display: flex; justify-content: space-between;"><div><input type="checkbox"/> STATE GOV'T      <input type="checkbox"/> INDIAN TRIBAL GOV'T      <input type="checkbox"/> HOSPITAL</div><div><input type="checkbox"/> FOR PROFIT ORGANIZATION      <input type="checkbox"/> INDIVIDUAL</div></div> <div style="display: flex; justify-content: space-between;"><div><input type="checkbox"/> LOCAL GOV'T      <input type="checkbox"/> INSTITUTION OF HIGHER EDUCATION      <input type="checkbox"/> OTHER NONPROFIT ORGANIZATION</div><div><input type="checkbox"/> C   <input type="checkbox"/> P   <input type="checkbox"/> SP      <input type="checkbox"/> OTHER (Specify) _____</div></div>							
14. ACCOUNTING AND APPROPRIATIONS DATA:						15. EMPLOYER I.D. NUMBER	
a. Appropriation Symbol		b. B&R Number		c. FT/AFP/OC			
16. BUDGET AND FUNDING INFORMATION							
a. CURRENT BUDGET PERIOD INFORMATION				b. CUMULATIVE DOE OBLIGATIONS			
(1) DOE Funds Obligated This Action      \$ _____				(1) This Budget Period      \$ _____ [Total of lines a.(1) and a.(3)]			
(2) DOE Funds Authorized for Carry Over      \$ _____				(2) Prior Budget Periods      \$ _____			
(3) DOE Funds Previously Obligated in this Budget Period      \$ _____				(3) Project Period to Date      \$ _____ [Total of lines b.(1) and b.(2)]			
(4) DOE Share of Total Approved Budget      \$ _____							
(5) Recipient Share of Total Approval Budget      \$ _____							
(6) Total Approved Budget      \$ _____							
17. TOTAL ESTIMATED COST OF PROJECT      \$ _____ (This is the current estimated cost of the project. It is not a promise to award nor an authorization to expend funds in this amount.)							
18. AWARD AGREEMENT TERMS AND CONDITIONS This award/agreement consists of this form plus the following: a. Special terms and conditions. b. Applicable program regulations (specify) _____ (Date) _____. c. DOE Assistance Regulations, 10 CFR Part-600, as amended. d. Application/proposal dated _____, <input type="checkbox"/> as submitted <input type="checkbox"/> with changes as negotiated.							
19. REMARKS							
20. EVIDENCE OF RECIPIENT ACCEPTANCE				21. AWARDED BY			
_____ (Signature of Authorized Recipient Official)      (Date)				_____ (Signature)      (Date)			
_____ (Name)				_____ (Name)			
_____ (Title)				_____ Contracting Officer (Title)			

## INSTRUCTIONS

*(This form shall be completed in accordance with the following instructions. For any clarification or additional information that might be needed, consult the appropriate section of the DOE Financial Assistance Procedures Manual (DOE-FAPM).)*

Insert in the space provided, in the line which begins, "Under the Authority of Public Law ...," the number and the name of the Public Law which authorizes this award. On the line below, enter the title of the pertinent program.

**Block 1** — Enter the project title as it appears in the SF-424 or equivalent application/proposal face sheet.

**Block 2** — Place a checkmark in the box beside the appropriate financial assistance instrument.

**Block 3** — Enter the name, address, and telephone number of the applicant/proposer as it appears in the SF-424 or equivalent application/proposal face sheet.

**Block 4** — Enter the instrument number. (See DOE-FAPM.)

**Block 5** — Enter the appropriate amendment number. (See DOE-FAPM for guidance.)

**Block 6** — Enter the starting date and expiration date for the current budget period. If a budget period is being changed, enter the starting date and expiration date for the budget period, as changed.

**Block 7** — Enter the starting date and anticipated completion date for the project. If a project period is being changed, enter the starting date and anticipated completion date for the project period, as changed.

**Block 8** — Enter the name and telephone number of the individual designated by the applicant/proposer as the director of the project.

**Block 9** — Enter the name and telephone number of the individual designated by the applicant/proposer as the contact for all business matters.

**Block 10** — Place a checkmark in the box opposite the term which identifies the type of action being taken. (The terms are defined in the DOE-FAPM.)

**Block 11** — Enter the name, address, and telephone of the individual designated by the DOE program office as the project officer.

**Block 12** — Enter the name, address, and telephone number of the individual/organization who will administer the agreement for DOE.

**Block 13** — Place a checkmark in the box beside the applicable recipient type. If the recipient is a for-profit organization, also check one of the lower boxes as follows: "C" for Corporation, "P" for Partnership, and "SP" for Sole Partnership. If the recipient is of a type not indicated, place a checkmark in the box beside "Other," and identify the recipient type in the space provided.

**Block 14** — Enter where indicated, the appropriation symbol, B&R number, Fund Type (FT)/AFP Code (AFP)/Objective Class (OC) and CFA Number from the Procurement/Financial Assistance Request Authorization (DOE Form PR-799A). Completion Block 14.d. is required only for awards made by Headquarters.

**Block 15** — Enter the applicant's/proposer's Federal Employer Identification No. from the SF-424 or equivalent application/proposal face sheet, or if the applicant/proposer is an individual, enter his/her social security number.

**Block 16** — Entries should be made as follows. (If no dollar entry is appropriate, a zero should be entered to indicate there was no error of omission.)

**Line a.(1)** — Enter the amount of DOE funds obligated by this action.

**Line a.(2)** — Enter the amount of DOE funds not expended in prior budget period(s), if any, authorized by DOE for expenditure in the current budget period.

**Line a.(3)** — Enter the amount of DOE funds previously obligated in the current budget period.

**Line a.(4)** — Enter DOE's share of the total approved budget shown in Line a.(6).

**Line a.(5)** — Enter the recipient's share of the total approved budget shown on Line a.(6).

**Line a.(6)** — Enter the total approved budget for the current budget period. (Add the amounts in Lines a.(4) and a.(5).)

**Line b.(1)** — Enter the amount of DOE funds obligated in the current budget period. (Add the amounts in Lines a.(1) and a.(3).)

**Line b.(2)** — Enter the amount obligated by DOE in prior budget periods.

**Line b.(3)** — Enter the amount obligated by DOE in the project period to date. (Add the amounts in Lines b.(1) and b.(2).)

**Block 17** — Must be completed for cooperative agreements. Contracting Officers may exercise discretion as to whether to complete it for grants. Enter the blank provided, the amount which represents the current estimate of total funds and dollar value of in-kind contributions (both DOE and recipient shares) needed to carry out the entire project. Include all funds and contributions previously provided, those being provided by this action, and all anticipated future obligations and contributions of both parties.

**Block 18** — Complete as follows.

**Item a.** — No entry necessary.

**Item b.** — Enter the legal citation from the Code of Federal Regulations or Federal Register and the effective date for the program regulations applicable to the program under which the award is made.

**Item c.** — Mark the box beside B for grants or C for cooperative agreements.

**Item d.** — In the blank provided, enter the date of the application/proposal. (If SF-424 is used, see block 23c on page 1.) Place a checkmark in the appropriate box to indicate whether the application/proposal was accepted as submitted or with negotiated changes.

**Block 19** — Enter any explanation or advisory comments which are required for, or applicable to, this action.

**Block 20** — Will be completed by the recipient.

**Block 21** — The Contracting Officer shall sign and date the top line. His/her name and title should be entered on the next two lines. This box must be signed prior to forwarding to recipient.

## **SECTION II -- SPECIAL TERMS AND CONDITIONS**

### **2.1 PREVAILING REGULATIONS (NOV 1998)**

As indicated on the face page, Block 18c, this Award is subject to the DOE Assistance Regulations of Title 10, Code of Federal Regulations, Part 600. This set of regulations may be found in most major libraries or on the World Wide Web at: <http://www.pr.doe.gov/fahome.html>

### **2.2 ORDER OF PRECEDENCE (DEC 1999)**

In the event of any inconsistency among the provisions of this agreement, the inconsistency shall be resolved by giving precedence as follows: (a) Applicable Public Laws; (b) the special terms and conditions or schedule of articles; (c) 10 CFR Part 600; and (d) other documents, exhibits and attachments.

### **2.3 SUBSTANTIAL INVOLVEMENT BETWEEN DOE AND THE RECIPIENT (JAN 1999)**

There will be substantial involvement between the DOE and the Recipient during performance of this Cooperative Agreement.

[TBD - The following types of activities are generally viewed as substantial involvement:

- Involvement in either the technical or business management aspects of the project or both;
- Desire to have greater control over the budget;
- Providing extensive assistance or training to a "high risk" organization;
- Substantial involvement and contribution to technical aspects of the effort are necessary for its accomplishment;
- Project, as proposed, would not be possible without extensive DOE collaboration;
- Option to immediately halt an activity;
- Review and approval during the project period of one stage before work can begin on a subsequent stage in sharing of the responsibility for the direction of the project. (i.e. The DOE will participate in establishing and approving a work plan, which will identify essential and significant milestones necessary for completion of the project. This work plan will be used to determine whether or not to proceed with subsequent tasks of the Statement of Project Objectives.)]

### **2.4 COST SHARING (DEC 1999)**

The maximum DOE obligation under this agreement is \$[TBD]. Costs incurred in excess of this amount shall be borne solely by the recipient. Allowable project costs shall be shared in the ratios set forth below:

Budget Period I: Feasibility Studies and Small-Scale Research

DOE: (maximum 80%)	\$ _____	[ ]%
Recipient: (minimum 20%)	_____	[ ]%
Total:	\$ _____	100%

Budget Period II: Limited Term Cofiring Demonstration Phase

DOE: (maximum 50%)	\$ _____	[ ]%
Recipient: (minimum 50%)	_____	[ ]%
Total:	\$ _____	100%

In the event allowable project costs exceed \$[TBD], such costs will be borne solely by the recipient.

### **2.5 FUNDING (JULY 1999)**

Funding in the amount of [TBD] is obligated and made available for payment of the Government's share of allowable costs.

The Recipient shall promptly notify the Contracting Officer in writing of the estimated amount of additional funds, if any, are required to continue timely performance under this award and when the funds will be required. The maximum DOE obligation to the Recipient is shown in Block 16 of the DOE Form 4600.1.



The Government is not obligated to increase the total dollar amount funded and the Recipient is not obligated to continue performance under this award or otherwise incur costs to the extent that the Government's share of allowable costs would exceed the amount obligated by the Government.

## **2.6 ALLOWABLE PREAWARD COSTS (MAR 1999)**

The Recipient is entitled to reimbursement of preaward costs in the amount not to exceed [TBD] of DOE obligations. These costs are limited to work associated with performance of [TBD], incurred during the period starting on [TBD] through the effective start date of this award (Block 7, DOE F 4600.1).

## **2.7 CONTINUATION APPLICATION (DEC 1999)**

Funding for each budget period within the approved project period shall be contingent on DOE approval of a continuation application submitted no later than 60 days prior to the end of the current budget period. The continuation application shall be submitted on the SF 424 in accordance with 10 CFR 600.26. Forms for submission of continuation applications can be found at <http://www.netl.doe.gov/business/forms/forms.html>.

## **2.8 METHOD OF PAYMENT (DEC 1999)**

The method of payment to the Recipient shall be accomplished by the method checked below:

- ☐ Advance in accordance with 10 CFR 600.122(b)
- ☐ Reimbursement in accordance with 10 CFR 600.122(e)
- ☐ Other in accordance with 10 CFR 600.122

The Recipient shall request advances or reimbursements using the Standard Form SF 270, Request for Advance or Reimbursement, and shall complete Blocks 1-11 and 13.

**Note 1:** If the block designating payment by Advance is used, the Recipient is allowed advances not to exceed the funding required to cover expenditures for any succeeding one month time period. Such requests for monthly advances shall be prepared using the Standard Form SF 270 in an original and two (2) copies.

The original is to be submitted to:

U. S. Department of Energy  
Oak Ridge Financial Services  
P. O. Box 4787  
Oak Ridge, TN 37831

The two copies are to be submitted to:

U. S. Department of Energy  
National Energy Technology Laboratory  
Commercial Payments Center  
P. O. Box 10940, MS 921-107  
Pittsburgh, PA 15236-0940

**Note 2:** If the block designating payment by Reimbursement is used, the Recipient shall submit the request for payment for costs incurred using the Standard Form SF 270 in an original and two (2) copies as indicated in Note 1 above. This request shall not be submitted more frequently than monthly.

## **2.9 NOTICE OF INVOICE PROCESSING BY SUPPORT CONTRACTOR (DEC 1999)**

A support service contractor performs the function of processing of all invoices submitted to the National Energy Technology Laboratory, against its awards. Therefore, this contractor has access to your business confidential cost/rate information. A special provision in this contractor's award requires the confidential treatment by all contractor employees of any and all business confidential information of other contractors and financial assistance recipients to which they have access.

## **2.10 ACKNOWLEDGMENT OF FEDERAL FUNDING (NOV 1998)**

When issuing statements, press releases, requests for proposals, bid solicitations, and other documents describing this project, the Recipient shall clearly state (1) the percentage of the total cost of the project which will be financed with Federal money, and (2) the dollar amount of Federal funds for the project.

### **2.11 REAL PROPERTY - NONE (JAN 1999)**

No real property may be acquired under this award.

### **2.12 RECIPIENT ACQUIRED PROPERTY (MAY 1999)**

Reference Attachment D for a listing of property authorized for acquisition under this award. Property acquired by the Recipient under this award shall be managed in accordance with 10 CFR 600.130 to 10 CFR 600.137, and reported as prescribed in Attachment B, Federal Assistance Reporting Checklist.

### **2.13 RECIPIENT ACQUIRED PROPERTY - NONE (JAN 1999)**

No recipient acquired property is anticipated under this award.

### **2.14 FEDERALLY OWNED PROPERTY (GOVERNMENT-FURNISHED) (JAN 1999)**

Reference Attachment [TBD] for a listing of federally-owned property. Federally-owned property shall be managed in accordance with 10 CFR 600.133(a), and reported as prescribed in Attachment B, Federal Assistance Reporting Checklist.

### **2.15 FEDERALLY OWNED PROPERTY (GOVERNMENT-FURNISHED) - NONE (JAN 1999)**

No Government-furnished property is provided under this award.

### **2.16 KEY PERSONNEL (NOV 1998)**

Recipient personnel considered to be essential and key to the work being performed hereunder are specified below.

<u>NAME</u>	<u>TITLE</u>	<u>TELEPHONE</u>
[TBD]	[TBD]	[TBD]

The personnel specified in this clause are considered to be essential to the project. Before diverting any key personnel to work outside the scope of this award, the Recipient shall notify the Contracting Officer reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the project. No key personnel may be substituted without the Contracting Officer's approval. Such approval shall be obtained in advance of the substitution, except that the Contracting Officer may ratify a substitution which, because of exigent circumstances, was made before the Recipient could request and/or obtain the Contracting Officer's approval.

### **2.17 PAPERWORK REDUCTION (NOV 1998)**

The award is subject to the requirements of the Paperwork Reduction Act of 1980 as implemented by the Office of Management and Budget rules, "Controlling Paperwork Burdens on the Public," published at 5 CFR 1320. These requirements apply if the Recipient will collect information from ten (10) or more respondents at the specific request of DOE, or if the award requires specific DOE approval of the information collection or the collection procedures.

The Recipient shall submit any proposed sponsored information collection to the person identified on the DOE F 4600.1 (Award Face Page, Block 12). The proposal shall be submitted at least 120 days prior to the intended date of information collection. DOE will seek the requisite approval from the Office of Management and Budget (OMB) and will promptly notify the Recipient of the disposition of the request.

### **2.18 PUBLIC ACCESS TO INFORMATION (JULY 1999)**

The Freedom of Information Act, as amended, and the DOE implementing regulations (10 CFR 1004) require DOE to release certain documents and records regarding awards to any person who provides a written request. The intended use of the information will not be a criterion for release. These requirements apply to information held by DOE and do not require Recipients, their subgrantees, or their contractors to permit public access to their records.

### **2.19 NATIONAL SECURITY (NOV 1998)**

It is not expected that activities under the award will generate or otherwise involve classified information (i.e., Restricted Data, Formerly Restricted Data, National Security Information).

However, if in the opinion of the Recipient or DOE such involvement becomes expected prior to the closeout of the award, the Recipient or DOE shall notify the other in writing immediately. If the Recipient believes any information developed or acquired may be classifiable, the Recipient shall not provide the potentially classifiable information to anyone, including the DOE officials with whom the Recipient normally communicates, except the Director of Classification, and shall protect such information as if it were classified until notified by DOE that a determination has been made that it does not require such handling. Correspondence which includes the specific information in question shall be sent by registered mail to U. S. Department of Energy, Attn.: Executive Assistant for Defense Programs, DP-4, 4A-019/FORS, 1000 Independence Avenue, Washington, D.C. 20585. If the information is determined to be classified, the Recipient may wish to discontinue the project, in which case the Recipient and DOE shall terminate the award by mutual agreement. If the award is to be terminated, all materials deemed by DOE to be classified shall be forwarded to DOE, in a manner specified by DOE, for proper disposition. If the Recipient and DOE wish to continue the award, even though classified information is involved, the Recipient shall be required to obtain both personnel and facility security clearances through the Office of Safeguards and Security for Headquarters awarded awards obtained through DOE field organizations. Costs associated with handling and protecting any such classified information shall be negotiated at the time the determination to proceed is made.

## **2.20 NOTICE REGARDING THE PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS -- SENSE OF CONGRESS (DEC 1999)**

It is the sense of the Congress, that to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.

## **2.21 LOBBYING RESTRICTIONS (ENERGY & WATER DEVELOPMENT APPROPRIATIONS ACT, 2000) (DEC 1999)**

The awardee agrees that none of the funds obligated on this award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

A copy of the DOE "Lobbying Brochure" which provides a summary of the statutory and regulatory restrictions regarding lobbying activities for Federal contractors can be found at (<http://www.pr.doe.gov/lobbying.html>).

## **2.22 NOTICE REGARDING UNALLOWABLE COSTS AND LOBBYING ACTIVITIES (NOV 1998)**

Recipients of financial assistance are cautioned to carefully review the allowable cost and other provisions applicable to expenditures under their particular award instruments. If financial assistance funds are spent for purposes or in amounts inconsistent with the allowable cost or any other provisions governing expenditures in an award instrument, the government may pursue a number of remedies against the Recipient, including in appropriate circumstances, recovery of such funds, termination of the award, suspension or debarment of the Recipient from future awards, and criminal prosecution for false statements.

Particular care should be taken by the Recipient to comply with the provisions prohibiting the expenditure of funds for lobbying and related activities. Financial assistance awards may be used to describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not to encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

## **2.23 YEAR 2000 COMPLIANCE (NOV 1998)**

Year 2000 compliant means, with respect to information technology, the information technology accurately processes date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations, to the extent that other information technology, used in combination with the information technology being acquired, properly exchanges date/time data with it.

The Recipient assures, by acceptance of this award, that items delivered under this contract are year 2000 compliant.

## **2.24 REPORTING (NOV 1998)**

Failure to comply with the reporting requirements contained in this award will be considered a material noncompliance with the terms of the award. Noncompliance may result in a withholding of future payments, suspension or termination of the current award, and withholding of future awards. A willful

failure to perform, or of unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by Federal agencies.

#### **2.25 RESEARCH INVOLVING RECOMBINANT DNA MOLECULES (NOV 1998)**

Any Recipient performing research involving recombinant DNA molecules and/or organisms and viruses containing recombinant DNA molecules agrees by acceptance of this award to comply with the National Institute of Health "Guidelines for Research Involving Recombinant DNA Molecules," (59 FR 34496, July 5, 1994 as amended by 59 FR 40170, 60 FR 20726, 61 FR 1482, 61 FR 10004, 62 FR 53335, 62 FR 56196, 62 FR 59032 and 63 FR 8052, "subject to change - call 301-496-9838 to obtain reference to a current version.")

#### **2.26 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) -- PRIOR APPROVALS (DEC 1999)**

The National Environmental Policy Act of 1969 (NEPA) requires that all Federal agencies consider the impacts of their projects on the human environment. As part of the DOE's NEPA requirements, the Recipient shall be required to supply to the DOE certain environmental information. DOE funds may only be expended by the Recipient on [TBD] activities, or in a manner inconsistent with 10 CFR 1506.1, until DOE notifies the Recipient that all NEPA requirements have been satisfied.

#### **2.27 SAFETY & HEALTH AND ENVIRONMENTAL PROTECTION (JAN 1999)**

The Recipient shall implement the DOE work in accordance with all applicable Federal, State, and local laws, including codes, ordinances, and regulations, covering safety, health, and environmental protection.

The Recipient agrees to include this clause in first-tier subcontracts and agrees to enforce the terms of this clause.

#### **2.28 PERMITS AND LICENSES (AUG 1999)**

Within sixty (60) days of award, the Recipient shall submit to the DOE Contracting Officer Representative (COR) a list of ES&H approvals that, in the Recipient's opinion, shall be required to complete the work under this award. The list shall include the topic of the approval being sought, the approving authority, and the expected submittal/approval schedule. The COR shall be notified as specific items are added or removed from the list and processed through their approval cycles.

The Recipient agrees to include this clause in first-tier subcontracts and agrees to enforce the terms of this clause.

## **SECTION III -- INTELLECTUAL PROPERTY PROVISIONS**

### **3.1 INTELLECTUAL PROPERTY PROVISIONS (JAN 1999)**

The patent and technical data clauses included in this section apply to this award. As used in these applicable clauses, the term "Patent Counsel" refers to the following point of contact:

Intellectual Property Law Division  
U.S. Department of Energy  
Chicago Operations Office  
9800 South Cass Avenue  
Argonne, IL 60439

In any of the FAR and DEAR clauses contained in this section, use of the term "Contract" means "Award" and "Contractor" means "Recipient."

The Recipient shall include intellectual property clauses in any contract awarded in accordance with requirements of the clauses in this section and of 10 CFR Part 600.27.

### **3.2 PUBLICATION OF RESULTS/ACKNOWLEDGMENT STATEMENT (JAN 1999)**

Publication of the results of the award is encouraged subject to any applicable restrictions in 10 CFR 600.27 (Patent and Data Provisions). Publications, as well as reports prepared under this award shall contain the following acknowledgment statement:

"This (describe material) was prepared with the support of the U.S. Department of Energy, under Award No. DE-[TBD]. However, any opinions, findings, conclusions, or recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of the DOE".

### **3.3 RECIPIENT PRESS RELEASES (APR 1998)**

The DOE policy and procedure on planned press releases requires that all Recipient press releases be reviewed and approved by DOE prior to issuance. Therefore, the Recipient shall, at least ten (10) days prior to the planned issue date, submit a draft copy to the Contracting Officer of any planned press releases related to work performed under this award. The Contracting Officer will then obtain necessary reviews and clearances and provide the Recipient with the results of such reviews prior to the planned issue date.

### **3.4 CONFIDENTIAL BUSINESS INFORMATION (DEC 1999)**

Data represented to the Department as being confidential business information, and which does not include "Technical Data" as that term is defined in 52.227-14 Rights in Data General clause of this agreement, shall be submitted as an attachment to the required reports and will be withheld from disclosure outside NETL to the extent permitted by law, provided such attachment and each page therein is stamped with the following legend and no other:

#### **CONFIDENTIAL BUSINESS INFORMATION**

The Recipient considers the data furnished herein to contain confidential business information which is to be withheld from disclosure outside NETL to the extent permitted by law.

### **3.5 CLAUSES INCORPORATED BY REFERENCE (AUG 1999)**

This solicitation incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

**Federal Acquisition Regulations (FAR)** (Clauses starting with 52):  
<http://www.arnet.gov/far/index.html>

**Department of Energy Acquisition Regulations (DEAR)** (Clauses starting with 952)  
<http://www.pr.doe.gov/dear.html>

**3.6 52.227-1 AUTHORIZATION AND CONSENT. (JUL 1995) -- ALTERNATE I (APR 1984)**

- (a) The Government authorizes and consents to all use and manufacture of any invention described in and covered by a United States patent in the performance of this contract or any subcontract at any tier.
- (b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold); however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

**3.7 52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT. (AUG 1996)**

- (a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.
- (b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.
- (c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at FAR 2.101.

**3.8 952.227-9 REFUND OF ROYALTIES. (MAR 1995)**

- (a) The contract price includes certain amounts for royalties payable by the Contractor or subcontractors or both, which amounts have been reported to the Contracting Officer.
- (b) The term "royalties" as used in this clause refers to any cost or charges in the nature of royalties, license fees, patent or use of or for the rights in patents and patent applications in connection with performing this contract or any subcontract hereunder. The term also includes any costs or charges associated with the access to, use of, or other right pertaining to data that is represented to be proprietary and is related to the performance of this contract or the copyrighted.
- (c) The Contractor shall furnish to the Contracting Officer, before final payment under this contract, a statement of royalties paid or required to be paid in connection with performing this contract and subcontracts hereunder together with the reasons.
- (d) The Contractor will be compensated for royalties reported under paragraph (c) of this clause, only to the extent that such royalties were included in the contract price and are determined by the Contracting Officer to be properly chargeable to the Government and any royalties that are included in the contract price are not, in fact, paid by the Contractor or are determined by the Contracting Officer not to be properly chargeable to the government and allocable to the contract, the contract price shall be reduced. Repayment or credit to the Government shall be made as the Contracting Officer directs. The approval by DOE of any individual payments or royalties shall not prevent the Government from contesting at any time the enforceability, validity, scope of, or title to, any patent or the proprietary nature of data pursuant to which a royalty or other payment is to be or has been made.
- (e) If, at any time within 3 years after final payment under this contract, the Contractor for any reason is relieved in whole or in part from the payment of the royalties included in the contract price as adjusted pursuant to paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer of that fact and shall reimburse the Government in a corresponding amount.
- (f) The substance of this clause, including this paragraph (f), shall be included in any subcontract in which the amount of royalties reported during negotiation of the subcontract exceeds \$250.

### **3.9 952.227-11 PATENT RIGHTS-RETENTION BY THE CONTRACTOR (SHORT FORM). (FEB 1995)**

#### **(a) Definitions.**

(1) "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321, et seq.).

(2) "Made" when used in relation to any invention means the conception of first actual reduction to practice of such invention.

(3) "Nonprofit organization" means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(4) "Practical application" means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

(5) "Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

(6) "Subject invention" means any invention of the contractor conceived or first actually reduced to practice in the performance of work under this contract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of contract performance.

(7) "Agency licensing regulations" and "agency regulations concerning the licensing of Government-owned inventions" mean the Department of Energy patent licensing regulations at 10 CFR Part 781.

(b) Allocation of principal rights. The Contractor may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Contractor retains title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

#### **(c) Invention disclosure, election of title, and filing of patent application by Contractor.**

(1) The Contractor will disclose each subject invention to the Department of Energy (DOE) within 2 months after the inventor discloses it in writing to Contractor personnel responsible for patent matters. The disclosure to DOE shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the DOE, the Contractor will promptly notify that agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.

(2) The Contractor will elect in writing whether or not to retain title to any such invention by notifying DOE within 2 years of disclosure to DOE. However, in any case where publication, on sale or public use has initiated the 1-year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by DOE to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Contractor will file its initial patent application on a subject invention to which it elects to retain title within 1 year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor will file patent applications in additional countries or international patent offices within either 10 months of the corresponding initial patent application or 6 months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure, election, and filing under subparagraphs (c)(1), (2), and (3) of this clause may, at the discretion of the agency, be granted.

(d) Conditions when the Government may obtain title. The Contractor will convey to the Federal agency, upon written request, title to any subject invention--

(1) If the Contractor fails to disclose or elect title to the subject invention within the times specified in paragraph (c) of this clause, or elects not to retain title; provided, that DOE may only request title within 60 days after learning of the failure of the Contractor to disclose or elect within the specified times.

(2) In those countries in which the Contractor fails to file patent applications within the times specified in paragraph (c) of this clause; provided, however, that if the Contractor has filed a patent application in a country after the times specified in paragraph (c) of this clause, but prior to its receipt of the written request of the Federal agency, the Contractor shall continue to retain title in that country.

(3) In any country in which the Contractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum rights to Contractor and protection of the Contractor right to file.

(1) The Contractor will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Contractor fails to disclose the invention within the times specified in paragraph (c) of this clause. The Contractor's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Contractor is a party and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the Federal agency, except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

(2) The Contractor's domestic license may be revoked or modified by DOE to the extent necessary to achieve expeditious practical application of subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404 and agency licensing regulations. This license will not be revoked in that field of use or the geographical areas in which the Contractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of DOE to the extent the Contractor, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, DOE will furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor will be allowed 30 days (or such other time as may be authorized by DOE for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 and agency regulations concerning the licensing of Government owned inventions, any decision concerning the revocation or modification of the license.

(f) Contractor action to protect the Government's interest.

(1) The Contractor agrees to execute or to have executed and promptly deliver to DOE all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Contractor elects to retain title, and



(ii) convey title to DOE when requested under paragraph (d) of this clause and to enable the government to obtain patent protection throughout the world in that subject invention.

(2) The Contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c) of this clause, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph (c)(1) of this clause. The Contractor shall instruct such employees, through employee agreements or other suitable educational programs, on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The Contractor will notify DOE of any decision not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

(4) The Contractor agrees to include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with Government support under (identify the contract) awarded by the United States Department of Energy. The Government has certain rights in the invention."

(g) Subcontracts. (1) The Contractor will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or domestic nonprofit organization. The subcontractor will retain all rights provided for the Contractor in this clause, and the Contractor will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(2) The contractor shall include in all other subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work the patent rights clause at 952.227-13.

(3) In the case of subcontracts, at any tier, DOE, subcontractor, and the Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and DOE with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (j) of this clause.

(h) Reporting on utilization of subject inventions. The Contractor agrees to submit, on request, periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received, by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceeding undertaken by that agency in accordance with paragraph (j) of this clause. As required by 35 U.S.C. 202(c)(5), DOE agrees it will not disclose such information to persons outside the Government without permission of the Contractor.

(i) Preference for United States industry. Notwithstanding any other provision of this clause, the Contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any product embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by DOE upon a showing by the Contractor or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in rights. The Contractor agrees that, with respect to any subject invention in which it has acquired title, DOE has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the Contractor, an assignee or exclusive

licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and, if the Contractor, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if DOE determines that--

- (1) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
- (2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;
- (3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee, or licensees; or
- (4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special provisions for contracts with nonprofit organizations. If the Contractor is a nonprofit organization, it agrees that--

- (1) Rights to a subject invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions; provided, that such assignee will be subject to the same provisions as the Contractor;
- (2) The Contractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when DOE deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;
- (3) The balance of any royalties or income earned by the Contractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions will be utilized for the support of scientific research or education; and
- (4) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms, and that it will give a preference to a small business firm when licensing a subject invention if the Contractor determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Contractor is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the contractor. However, the Contractor agrees that the Secretary of Commerce may review the Contractor's licensing program and decisions regarding small business applicants, and the Contractor will negotiate changes to its licensing policies, procedures, or practices with the Secretary of Commerce when that Secretary's review discloses that the Contractor could take reasonable steps to more effectively implement the requirements of this subparagraph (k)(4).

(l) Communications.

- (1) The contractor shall direct any notification, disclosure, or request to DOE provided for in this clause to the DOE patent counsel assisting the DOE contracting activity, with a copy of the communication to the Contracting Officer.
- (2) Each exercise of discretion or decision provided for in this clause, except subparagraph (k)(4), is reserved for the DOE Patent Counsel and is not a claim or dispute and is not subject to the Contract Disputes Act of 1978.
- (3) Upon request of the DOE Patent Counsel or the contracting officer, the contractor shall provide any or all of the following:

(i) a copy of the patent application, filing date, serial number and title, patent number, and issue date for any subject invention in any country in which the contractor has applied for a patent;

(ii) a report, not more often than annually, summarizing all subject inventions which were disclosed to DOE individually during the reporting period specified; or

(iii) a report, prior to closeout of the contract, listing all subject inventions or stating that there were none.

### **3.10 952.227-13 PATENT RIGHTS-ACQUISITION BY THE GOVERNMENT. (SEP 1997)**

#### **(a) Definitions.**

"Invention", as used in this clause, means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code or any novel variety of plant that is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321, et seq.).

"Practical application", as used in this clause, means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

"Subject invention", as used in this clause, means any invention of the Contractor conceived or first actually reduced to practice in the course of or under this contract.

"Patent Counsel", as used in this clause, means the Department of Energy Patent Counsel assisting the procuring activity.

"DOE patent waiver regulations", as used in this clause, means the Department of Energy patent waiver regulations at 41 CFR 9-9.109- 6 or successor regulations. See 10 CFR part 784.

"Agency licensing regulations" and "applicable agency licensing regulations", as used in this clause, mean the Department of Energy patent licensing regulations at 10 CFR Part 781.

#### **(b) Allocations of principal rights.**

(1) Assignment to the Government. The Contractor agrees to assign to the Government the entire right, title, and interest throughout the world in and to each subject invention, except to the extent that rights are retained by the Contractor under subparagraph (b)(2) and paragraph (d) of this clause.

#### **(2) Greater rights determinations.**

(i) The contractor, or an employee-inventor after consultation with the Contractor, may request greater rights than the nonexclusive license and the foreign patent rights provided in paragraph (d) of this clause on identified inventions in accordance with the DOE patent waiver regulations. A request for a determination of whether the Contractor or the employee-inventor is entitled to acquire such greater rights must be submitted to the Patent Counsel with a copy to the Contracting Officer at the time of the first disclosure of the invention pursuant to subparagraph (e)(2) of this clause, or not later than 8 months thereafter, unless a longer period is authorized in writing by the Contracting Officer for good cause shown in writing by the Contractor. Each determination of greater rights under this contract shall be subject to paragraph (c) of this clause, unless otherwise provided in the greater rights determination, and to the reservations and conditions deemed to be appropriate by the Secretary of Energy or designee.

(ii) Within two (2) months after the filing of a patent application, the Contractor shall provide the filing date, serial number and title, a copy of the patent application (including an English-language version if filed in a language other than English), and, promptly upon issuance of a patent, provide the patent number and issue date for any subject invention in any country for which the Contractor has been granted title or the right to file and prosecute on behalf of the United States by the Department of Energy.

(iii) Not less than thirty (30) days before the expiration of the response period for any action required by the Patent and Trademark Office, notify the Patent Counsel of any decision not to continue prosecution of the application.

(iv) Upon request, the Contractor shall furnish the Government an irrevocable power to inspect and make copies of the patent application file.

(c) Minimum rights acquired by the Government.

(1) With respect to each subject invention to which the Department of Energy grants the Contractor principal or exclusive rights, the Contractor agrees as follows:

(i) The Contractor hereby grants to the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced each subject invention throughout the world by or on behalf of the Government of the United States (including any Government agency).

(ii) The Contractor agrees that with respect to any subject invention in which DOE has granted it title, DOE has the right in accordance with the procedures in the DOE patent waiver regulations (10 CFR part 784) to require the Contractor, an assignee, or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Contractor, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if it determines that--

(A) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

(B) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;

(C) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee, or licensees; or

(D) Such action is necessary because the agreement required by paragraph (i) of this clause has neither been obtained nor waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(iii) The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceedings undertaken by that agency in accordance with subparagraph (c)(1)(ii) of this clause. To the extent data or information supplied under this section is considered by the Contractor, its licensee, or assignee to be privileged and confidential and is so marked, the Department of Energy agrees that, to the extent permitted by law, it will not disclose such information to persons outside the Government.

(iv) The Contractor agrees, when licensing a subject invention, to arrange to avoid royalty charges on acquisitions involving Government funds, including funds derived through a Military Assistance Program of the Government or otherwise derived through the Government, to refund any amounts received as royalty charges on a subject invention in acquisitions for, or on behalf of, the Government, and to provide for such refund in any instrument transferring rights in the invention to any party.

(v) The Contractor agrees to provide for the Government's paid-up license pursuant to subparagraph (c)(1)(i) of this clause in any instrument transferring

rights in a subject invention and to provide for the granting of licenses as required by subparagraph (c)(1)(ii) of this clause, and for the reporting of utilization information as required by subparagraph (c)(1)(iii) of this clause, whenever the instrument transfers principal or exclusive rights in a subject invention. (2) Nothing contained in this paragraph (c) shall be deemed to grant to the Government any rights with respect to any invention other than a subject invention.

(d) Minimum rights to the Contractor.

(1) The Contractor is hereby granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the Government obtains title, unless the Contractor fails to disclose the subject invention within the times specified in subparagraph (e)(2) of this clause. The Contractor's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Contractor is a part and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of DOE except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

(2) The Contractor's domestic license may be revoked or modified by DOE to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions in 37 CFR Part 404 and agency licensing regulations. This license will not be revoked in that field of use or the geographical areas in which the Contractor has achieved practical applications and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of DOE to the extent the Contractor, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, DOE will furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor will be allowed 30 days (or such other time as may be authorized by DOE for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with applicable agency licensing regulations and 37 CFR Part 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

(4) The Contractor may request the right to acquire patent rights to a subject invention in any foreign country where the Government has elected not to secure such rights, subject to the conditions in subparagraphs (d)(4)(i) through (d)(4)(vii) of this clause. Such request must be made in writing to the Patent Counsel as part of the disclosure required by subparagraph (e)(2) of this clause, with a copy to the DOE Contracting Officer. DOE approval, if given, will be based on a determination that this would best serve the national interest.

(i) The recipient of such rights, when specifically requested by DOE, and three years after issuance of a foreign patent disclosing the subject invention, shall furnish DOE a report stating:

(A) The commercial use that is being made, or is intended to be made, of said invention, and

(B) The steps taken to bring the invention to the point of practical application or to make the invention available for licensing.

(ii) The Government shall retain at least an irrevocable, nonexclusive, paid-up license to make, use, and sell the invention throughout the world by or on behalf of the Government (including any Government agency) and States and domestic municipal governments, unless the Secretary of Energy or designee determines that it would not be in the public interest to acquire the license for the States and domestic municipal governments.

(iii) If noted elsewhere in this contract as a condition of the grant of an advance waiver of the Government's title to inventions under this contract, or, if no advance waiver was granted but a waiver of the Government's title to an identified invention is granted pursuant to subparagraph (b)(2) of this clause upon a determination by

the Secretary of Energy that it is in the Government's best interest, this license shall include the right of the Government to sublicense foreign governments pursuant to any existing or future treaty or agreement with such foreign governments.

(iv) Subject to the rights granted in subparagraphs (d)(1), (2), and (3) of this clause, the Secretary of Energy or designee shall have the right to terminate the foreign patent rights granted in this subparagraph (d)(4) in whole or in part unless the recipient of such rights demonstrates to the satisfaction of the Secretary of Energy or designee that effective steps necessary to accomplish substantial utilization of the invention have been taken or within a reasonable time will be taken.

(v) Subject to the rights granted in subparagraphs (d)(1), (2), and (3) of this clause, the Secretary of Energy or designee shall have the right, commencing four years after foreign patent rights are accorded under this subparagraph (d)(4), to require the granting of a nonexclusive or partially exclusive license to a responsible applicant or applicants, upon terms reasonable under the circumstances, and in appropriate circumstances to terminate said foreign patent rights in whole or in part, following a hearing upon notice thereof to the public, upon a petition by an interested person justifying such hearing:

(A) If the Secretary of Energy or designee determines, upon review of such material as he deems relevant, and after the recipient of such rights or other interested person has had the opportunity to provide such relevant and material information as the Secretary or designee may require, that such foreign patent rights have tended substantially to lessen competition or to result in undue market concentration in any section of the United States in any line of commerce to which the technology relates; or

(B) Unless the recipient of such rights demonstrates to the satisfaction of the Secretary of Energy or designee at such hearing that the recipient has taken effective steps, or within a reasonable time thereafter is expected to take such steps, necessary to accomplish substantial utilization of the invention.

(vi) If the contractor is to file a foreign patent application on a subject invention, the Government agrees, upon written request, to use its best efforts to withhold publication of such invention disclosures for such period of time as specified by Patent Counsel, but in no event shall the Government or its employees be liable for any publication thereof.

(vii) Subject to the license specified in subparagraphs (d)(1), (2), and (3) of this clause, the contractor or inventor agrees to convey to the Government, upon request, the entire right, title, and interest in any foreign country in which the contractor or inventor fails to have a patent application filed in a timely manner or decides not to continue prosecution or to pay any maintenance fees covering the invention. To avoid forfeiture of the patent application or patent, the contractor or inventor shall, not less than 60 days before the expiration period for any action required by any patent office, notify the Patent Counsel of such failure or decision, and deliver to the Patent Counsel, the executed instruments necessary for the conveyance specified in this paragraph.

(e) Invention identification, disclosures, and reports. (1) The Contractor shall establish and maintain active and effective procedures to assure that subject inventions are promptly identified and disclosed to Contractor personnel responsible for patent matters within 6 months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this contract. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of subject inventions, and records that show that the procedures for identifying and disclosing the inventions are followed. Upon request, the Contractor shall furnish the Contracting Officer a description of such procedures for evaluation and for determination as to their effectiveness.

(2) The Contractor shall disclose each subject invention to the DOE Patent Counsel with a copy to the Contracting Officer within 2 months after the inventor discloses it in writing to Contractor personnel responsible for patent matters or, if earlier, within 6 months after the

Contractor becomes aware that a subject invention has been made, but in any event before any on sale, public use, or publication of such invention known to the Contractor. The disclosure to DOE shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale, or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to DOE, the Contractor shall promptly notify Patent Counsel of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor. The report should also include any request for a greater rights determination in accordance with subparagraph (b)(2) of this clause. When an invention is disclosed to DOE under this paragraph, it shall be deemed to have been made in the manner specified in Sections (a)(1) and (a)(2) of 42 U.S.C. 5908, unless the Contractor contends in writing at the time the invention is disclosed that it was not so made.

(3) The Contractor shall furnish the Contracting Officer the following:

- (i) Interim reports every 12 months (or such longer period as may be specified by the Contracting Officer) from the date of the contract, listing all subject inventions during that period, and including a statement that all subject inventions have been disclosed (or that there are not such inventions), and that such disclosure has been made in accordance with the procedures required by paragraph (e)(1) of this clause.
- (ii) A final report, within 3 months after completion of the contracted work listing all subject inventions or containing a statement that there were no such inventions, and listing all subcontracts at any tier containing a patent rights clause or containing a statement that there were no such subcontracts.

(4) The Contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c) of this clause, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph (e)(2) of this clause.

(5) The Contractor agrees, subject to FAR 27.302(j), that the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this clause.

(f) Examination of records relating to inventions.

(1) The Contracting Officer or any authorized representative shall, until 3 years after final payment under this contract, have the right to examine any books (including laboratory notebooks), records, and documents of the Contractor relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this contract to determine whether--

- (i) Any such inventions are subject inventions;
- (ii) The Contractor has established and maintains the procedures required by subparagraphs (e)(1) and (4) of this clause;
- (iii) The Contractor and its inventors have complied with the procedures.

(2) If the Contracting Officer learns of an unreported Contractor invention which the Contracting Officer believes may be a subject invention, the Contractor may be required to disclose the invention to DOE for a determination of ownership rights.

(3) Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.

(g) Withholding of payment (NOTE: This paragraph does not apply to subcontracts).

(1) Any time before final payment under this contract, the Contracting Officer may, in the Government's interest, withhold payment until a reserve not exceeding \$50,000 or 5 percent of the amount of this contract, whichever is less, shall have been set aside if, in the Contracting Officer's opinion, the Contractor fails to--

(i) Convey to the Government, using a DOE-approved form, the title and/or rights of the Government in each subject invention as required by this clause.

(ii) Establish, maintain, and follow effective procedures for identifying and disclosing subject inventions pursuant to subparagraph (e)(1) of this clause;

(iii) Disclose any subject invention pursuant to subparagraph (e)(2) of this clause;

(iv) Deliver acceptable interim reports pursuant to subparagraph (e)(3)(i) of this clause; or

(v) Provide the information regarding subcontracts pursuant to subparagraph (h)(4) of this clause. (2) Such reserve or balance shall be withheld until the Contracting Officer has determined that the Contractor has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by this clause. (3) Final payment under this contract shall not be made before the Contractor delivers to the Contracting Officer all disclosures of subject inventions required by subparagraph (e)(2) of this clause, and acceptable final report pursuant to subparagraph (e)(3)(ii) of this clause, and the Patent Counsel has issued a patent clearance certification to the Contracting Officer.

(4) The Contracting Officer may decrease or increase the sums withheld up to the maximum authorized above. No amount shall be withheld under this paragraph while the amount specified by this paragraph is being withheld under other provisions of the contract. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government rights.

(h) Subcontracts.

(1) The contractor shall include the clause at 48 CFR 952.227-11 (suitably modified to identify the parties) in all subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work to be performed by a small business firm or domestic nonprofit organization, except where the work of the subcontract is subject to an Exceptional Circumstances Determination by DOE. In all other subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work, the contractor shall include this clause (suitably modified to identify the parties). The contractor shall not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(2) In the event of a refusal by a prospective subcontractor to accept such a clause the Contractor--

(i) Shall promptly submit a written notice to the Contracting Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

(ii) Shall not proceed with such subcontract without the written authorization of the Contracting Officer.

(3) In the case of subcontracts at any tier, DOE, the subcontractor, and Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and DOE with respect to those matters covered by this clause.

(4) The Contractor shall promptly notify the Contracting Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Contracting Officer, the Contractor shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.



(5) The contractor shall identify all subject inventions of the subcontractor of which it acquires knowledge in the performance of this contract and shall notify the Patent Counsel, with a copy to the contracting officer, promptly upon identification of the inventions.

(i) Preference United States industry. Unless provided otherwise, no Contractor that receives title to any subject invention and no assignee of any such Contractor shall grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any products embodying the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement may be waived by the Government upon a showing by the Contractor or assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) Atomic energy.

(1) No claim for pecuniary award of compensation under the provisions of the Atomic Energy Act of 1954, as amended, shall be asserted with respect to any invention or discovery made or conceived in the course of or under this contract.

(2) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will obtain patent agreements to effectuate the provisions of subparagraph (e)(1) of this clause from all persons who perform any part of the work under this contract, except nontechnical personnel, such as clerical employees and manual laborers.

(k) Background Patents.

(1) Background Patent means a domestic patent covering an invention or discovery which is not a subject invention and which is owned or controlled by the Contractor at any time through the completion of this contract:

(i) Which the contractor, but not the Government, has the right to license to others without obligation to pay royalties thereon, and

(ii) Infringement of which cannot reasonably be avoided upon the practice of any specific process, method, machine, manufacture, or composition of matter (including relatively minor modifications thereof) which is a subject of the research, development, or demonstration work performed under this contract.

(2) The Contractor agrees to and does hereby grant to the Government a royalty-free, nonexclusive license under any background patent for purposes of practicing a subject of this contract by or for the Government in research, development, and demonstration work only.

(3) The Contractor also agrees that upon written application by DOE, it will grant to responsible parties, for purposes of practicing a subject of this contract, nonexclusive licenses under any background patent on terms that are reasonable under the circumstances. If, however, the Contractor believes that exclusive rights are necessary to achieve expeditious commercial development or utilization, then a request may be made to DOE for DOE approval of such licensing by the Contractor.

(4) Notwithstanding subparagraph (k)(3) of this clause, the contractor shall not be obligated to license any background patent if the Contractor demonstrates to the satisfaction of the Secretary of Energy or designee that:

(i) a competitive alternative to the subject matter covered by said background patent is commercially available or readily introducible from one or more other sources; or

(ii) the Contractor or its licensees are supplying the subject matter covered by said background patent in sufficient quantity and at reasonable prices to satisfy market needs, or have taken effective steps or within a reasonable time are expected to take effective steps to so supply the subject matter. l) Publication. It is recognized that during the course of the work under this contract, the Contractor or its employees may from time to time desire to release or publish information regarding scientific or technical developments conceived or first actually reduced

to practice in the course of or under this contract. In order that public disclosure of such information will not adversely affect the patent interests of DOE or the Contractor, patent approval for release of publication shall be secured from Patent Counsel prior to any such release or publication.

(m) Forfeiture of rights in unreported subject inventions.

(1) The Contractor shall forfeit and assign to the Government, at the request of the Secretary of Energy or designee, all rights in any subject invention which the Contractor fails to report to Patent Counsel within six months after the time the Contractor:

(i) Files or causes to be filed a United States or foreign patent application thereon; or

(ii) Submits the final report required by subparagraph (e)(2)(ii) of this clause, whichever is later.

(2) However, the Contractor shall not forfeit rights in a subject invention if, within the time specified in subparagraph (m)(1) of this clause, the Contractor:

(i) Prepares a written decision based upon a review of the record that the invention was neither conceived nor first actually reduced to practice in the course of or under the contract and delivers the decision to Patent Counsel, with a copy to the Contracting Officer; or

(ii) Contending that the invention is not a subject invention, the Contractor nevertheless discloses the invention and all facts pertinent to this contention to the Patent Counsel, with a copy to the Contracting Officer; or

(iii) Establishes that the failure to disclose did not result from the Contractor's fault or negligence.

(3) Pending written assignment of the patent application and patents on a subject invention determined by the Secretary of Energy or designee to be forfeited (such determination to be a final decision under the Disputes clause of this contract), the Contractor shall be deemed to hold the invention and the patent applications and patents pertaining thereto in trust for the Government. The forfeiture provision of this paragraph (m) shall be in addition to and shall not supersede other rights and remedies which the Government may have with respect to subject inventions.

**3.11 FAR 52.227-14 RIGHTS IN DATA -GENERAL. (JUN 1987) WITH ALTERNATE V (JUN 1987) AS AMENDED BY DEAR 927.409 (JAN 1999)**

(a) Definitions.

(1) "Computer databases," as used in this clause, means a collection of data in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.

(2) "Computer software," as used in this clause, means (i) computer programs which are data comprising a series of instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations and (ii) data comprising source code listings, design details, algorithms, processes, flow charts, formulae, and related material that would enable the computer program to be produced, created, or compiled. The term does not include computer data bases.

(3) "Data," as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. For the purposes of this clause, the term does not include data incidental to the administration of this contract, such as financial, administrative, cost and pricing, or management information.

(4) "Form, fit, and function data," as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability, as well as data identifying source, size, configuration, mating, and attachment characteristics, functional characteristics, and performance requirements; except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

(5) "Limited rights data," as used in this clause, means data, other than computer software, developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged. The Government's rights to use, duplicate, or disclose limited rights data are as set forth in the Limited Rights Notice of subparagraph (g)(2) of this section if included in this clause.

(6) "Restricted computer software," as used in this clause, means computer software developed at private expense and that is a trade secret; is commercial or financial and is confidential or privileged; or is published copyrighted computer software, including minor modifications of any such computer software. The Government's rights to use, duplicate, or disclose restricted computer software are as set forth in the Restricted Rights Notice of subparagraph (g)(3) of this section if included in this clause.

(7) "Technical data," as used in this clause, means recorded data, regardless of form or characteristic, that are of a scientific or technical nature. Technical data does not include computer software, but does include manuals and instructional materials and technical data formatted as a computer data base.

(8) "Unlimited rights," as used in this clause, means the rights of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, including by electronic means, and perform publicly and display publicly, in any manner, including by electronic means, and for any purpose whatsoever, and to have or permit others to do so.

(b) Allocation of rights.

(1) Except as provided in paragraph (c) of this clause regarding copyright, the Government shall have unlimited rights in -

(i) Data first produced in the performance of this contract;

(ii) Form, fit, and function data delivered under this contract;

(iii) Data delivered under this contract (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this contract; and

(iv) All other data delivered under this contract unless provided otherwise for limited rights data or restricted computer software in accordance with paragraph (g) of this clause.

(2) The Contractor shall have the right to -

(i) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, unless provided otherwise in paragraph (d) of this clause;

(ii) Protect from unauthorized disclosure and use those data which are limited rights data or restricted computer software to the extent provided in paragraph (g) of this clause;

(iii) Substantiate use of, add or correct limited rights, restricted rights, or copyright notices and to take other appropriate action, in accordance with paragraphs (e) and (f) of this clause; and

(iv) Establish claim to copyright subsisting in data first produced in the performance of this contract to the extent provided in subparagraph (c)(1) of this clause.

(c) Copyright -

(1) Data first produced in the performance of this contract. Unless provided otherwise in paragraph (d) of this clause, the Contractor may establish, without prior approval of the Contracting Officer, claim to copyright subsisting in scientific and technical articles based on or containing data first produced in the performance of this contract and published in academic, technical or professional journals, symposia proceedings or similar works. The prior, express written permission of the Contracting Officer is required to establish claim to copyright subsisting in all other data first produced in the performance of this contract. When claim to copyright is made, the Contractor shall affix the applicable copyright notices of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For data other than computer software the Contractor grants to the Government, and others acting on its behalf, a paidnonexclusive, irrevocable worldwide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on

behalf of the Government. For computer software, the Contractor grants to the Government and others acting in its behalf, a paidnonexclusive, irrevocable worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly by or on behalf of the Government.

(2) Data not first produced in the performance of this contract. The Contractor shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract and which contains the copyright notice of 17 U.S.C. 401 or 402, unless the Contractor identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (c)(1) of this clause; provided, however, that if such data are computer software the Government shall acquire a copyright license as set forth in subparagraph (g)(3) of this clause if included in this contract or as otherwise may be provided in a collateral agreement incorporated in or made part of this contract.

(3) Removal of copyright notices. The Government agrees not to remove any copyright notices placed on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

(d) Release, publication and use of data.

(1) The Contractor shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this clause or expressly set forth in this contract.

(2) The Contractor agrees that to the extent it receives or is given access to data necessary for the performance of this contract which contain restrictive markings, the Contractor shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by the Contracting Officer.

(3) The Contractor agrees not to assert copyright in computer software first produced in the performance of this contract without prior written permission of the DOE Patent Counsel assisting the contracting activity. When such permission is granted, the Patent Counsel shall specify appropriate terms, conditions, and submission requirements to assure utilization, dissemination, and commercialization of the data. The Contractor, when requested, shall promptly deliver to Patent Counsel a duly executed and approved instrument fully confirmatory of all rights to which the Government is entitled.

(e) Unauthorized marking of data.

(1) Notwithstanding any other provisions of this contract concerning inspection or acceptance, if any data delivered under this contract are marked with the notices specified in subparagraph (g)(2) or (g)(3) of this clause and use of such is not authorized by this clause, or if such data bears any other restrictive or limiting markings not authorized by this contract, the Contracting Officer may at any time either return the data to the Contractor, or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Contracting Officer shall make written inquiry to the Contractor affording the Contractor 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Contractor fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Contracting Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Contractor provides written justification to substantiate the propriety of the markings within the period set in subdivision (e)(1)(i) of this clause, the Contracting Officer shall consider such written justification and determine whether or not the markings are to be canceled or ignored. If the Contracting Officer determines that the markings are authorized, the Contractor shall be so notified in writing. If the Contracting Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Contracting Officer shall furnish the Contractor a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Contractor files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government shall continue to abide by the markings under this subdivision

(e)(1)(iii) until final resolution of the matter either by the Contracting Officer's determination becoming final (in which instance the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in subparagraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

(3) This paragraph (e) does not apply if this contract is for a major system or for support of a major system by a civilian agency other than NASA and the U.S. Coast Guard agency subject to the provisions of Title III of the Federal Property and Administrative Services Act of 1949.

(4) Except to the extent the Government's action occurs as the result of final disposition of the matter by a court of competent jurisdiction, the Contractor is not precluded by this paragraph (e) from bringing a claim under the Contract Disputes Act, including pursuant to the Disputes clause of this contract, as applicable, that may arise as the result of the Government removing or ignoring authorized markings on data delivered under this contract.

(f) Omitted or incorrect markings.

(1) Data delivered to the Government without either the limited rights or restricted rights notice as authorized by paragraph (g) of this clause, or the copyright notice required by paragraph (c) of this clause, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Contractor may request, within 6 months (or a longer time approved by the Contracting Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Contractor's expense, and the Contracting Officer may agree to do so if the Contractor

(i) Identifies the data to which the omitted notice is to be applied;

(ii) Demonstrates that the omission of the notice was inadvertent;

(iii) Establishes that the use of the proposed notice is authorized; and

(iv) Acknowledges that the Government has no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(2) The Contracting Officer may also (i) permit correction at the Contractor's expense of incorrect notices if the Contractor identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized, or (ii) correct any incorrect notices.

(g) Protection of limited rights data and restricted computer software.

(1) When data other than that listed in subdivisions (b)(1)(i), (ii), and (iii) of this clause are specified to be delivered under this contract and qualify as either limited rights data or restricted computer software, if the Contractor desires to continue protection of such data, the Contractor shall withhold such data and not furnish them to the Government under this contract. As a condition to this withholding, the Contractor shall identify the data being withheld and furnish form, fit, and function data in lieu thereof. Limited rights data that are formatted as a computer data base for delivery to the Government are to be treated as limited rights data and not restricted computer software.

(2) (Reserved)

(3) (Reserved)

(h) Subcontracting. The Contractor has the responsibility to obtain from its subcontractors all data and rights therein necessary to fulfill the Contractor's obligations to the Government under this contract. If a subcontractor refuses to accept terms affording the Government such rights, the Contractor shall promptly bring such refusal to the attention of the Contracting Officer and not proceed with subcontract award without further authorization.

(i) Relationship to patents. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government.

(j) The Contractor agrees, except as may be otherwise specified in this contract for specific data items listed as not subject to this paragraph, that the Contracting Officer or an authorized representative may, up to three years after acceptance of all items to be delivered under this contract, inspect at the Contractor's facility any data withheld pursuant to paragraph (g)(1) of this clause, for purposes of verifying the Contractor's assertion pertaining to the limited rights or restricted rights status of the data or for evaluating work performance. Where the Contractor whose data are to be inspected demonstrates to the Contracting Officer that there would be a possible conflict of interest if the inspection were made by a particular representative, the Contracting Officer shall designate an alternate inspector.

### **3.12 FAR 52.227-14 RIGHTS IN DATA GENERAL. (JUN 1987) ALTERNATE II (JUN 1987)**

[Insert the following paragraph (g)(2) if it is necessary to obtain the delivery of limited rights data:]

(2) Notwithstanding subparagraph (g)(1) of this clause, the contract may identify and specify the delivery of limited rights data, or the Contracting Officer may require by written request the delivery of limited rights data that has been withheld or would otherwise be withholdable. If delivery of such data is so required, the Contractor may affix the following "Limited Rights Notice" to the data and the Government will thereafter treat the data, subject to the provisions of paragraphs (e) and (f) of this clause, in accordance with such Notice:

#### **LIMITED RIGHTS NOTICE (JUN 1987)**

(a) These data are submitted with limited rights under Government Contract No. \_\_\_\_\_ (and subcontract \_\_\_\_\_, if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Contractor, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any; provided that the Government makes such disclosure subject to prohibition against further use and disclosure: [Agencies may list additional purposes as set forth in 27.404(d)(1) or if none, so state.]

(b) This Notice shall be marked on any reproduction of these data, in whole or in part.

(End of notice)

### **3.13 FAR 52.227-14 RIGHTS IN DATA GENERAL. (JUN 1987) ALTERNATE III (JUN 1987)**

[Insert the following paragraph (g)(3) if it is necessary to obtain the delivery of restricted computer software:]

(3)(i) Notwithstanding subparagraph (g)(1) of this clause, the contract may identify and specify the delivery of restricted computer software, or the Contracting Officer may require by written request the delivery of restricted computer software that has been withheld or would otherwise be withholdable. If delivery of such computer software is so required, the Contractor may affix the following "Restricted Rights Notice" to the computer software and the Government will thereafter treat the computer software, subject to paragraphs (e) and (f) of this clause, in accordance with the Notice

#### **RESTRICTED RIGHTS NOTICE (JUN 1987)**

(a) This computer software is submitted with restricted rights under Government Contract No. [ ] (and subcontract [ ], if appropriate). It may not be used, reproduced, or disclosed by the Government except as provided in paragraph (b) of this Notice or as otherwise expressly stated in the contract.

(b) This computer software may be

(1) Used or copied for use in or with the computer or computers for which it was acquired, including use at any Government installation to which such computer or computers may be transferred;

(2) Used or copied for use in a backup computer if any computer for which it was acquired is inoperative;

(3) Reproduced for safekeeping (archives) or backup purposes;

(4) Modified, adapted, or combined with other computer software, provided that the modified, combined, or adapted portions of the derivative software incorporating restricted computer software are made subject to the same restricted rights;

(5) Disclosed to and reproduced for use by support service Contractors in accordance with subparagraphs (b)(1) through (4) of this clause, provided the Government makes such disclosure or reproduction subject to these restricted rights; and

(6) Used or copied for use in or transferred to a replacement computer.

(c) Notwithstanding the foregoing, if this computer software is published copyrighted computer software, it is licensed to the Government, without disclosure prohibitions, with the minimum rights set forth in paragraph (b) of this clause.

(d) Any other rights or limitations regarding the use, duplication, or disclosure of this computer software are to be expressly stated in, or incorporated in, the contract.

(e) This Notice shall be marked on any reproduction of this computer software, in whole or in part.

(End of notice)

### **3.14 FAR 52.227-14 RIGHTS IN DATA GENERAL. (JUN 1987) ALTERNATE IV (JUN 1987)**

[Substitute paragraph (c)(1) in contracts for basic and applied research to be performed solely by universities and colleges.]

#### **(c) Copyright.**

(1) Data first produced in the performance of the contract. Except as otherwise specifically provided in this contract, the Contractor may establish claim to copyright subsisting in any data first produced in the performance of this contract. When claim to copyright is made, the Contractor shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For data other than computer software, the Contractor grants to the Government, and others acting on its behalf, a paidnonexclusive, irrevocable, worldwide license for all such data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government. For computer software, the Contractor grants to the Government and others acting on its behalf, a paid up, nonexclusive, irrevocable worldwide license for all such computer software to reproduce, prepare derivative works, and perform publicly and display publicly, by or on behalf of the Government.

### **3.15 52.227-16 ADDITIONAL DATA REQUIREMENTS. (JUN 1987)**

(a) In addition to the data (as defined in the clause at 52.227-14, Rights in Data - General clause or other equivalent included in this contract) specified elsewhere in this contract to be delivered, the Contracting Officer may, at any time during contract performance or within a period of 3 years after acceptance of all items to be delivered under this contract, order any data first produced or specifically used in the performance of this contract.

(b) The Rights in Data - General clause or other equivalent included in this contract is applicable to all data ordered under this Additional Data Requirements clause. Nothing contained in this clause shall require the Contractor to deliver any data the withholding of which is authorized by the Rights in Data - General or other equivalent clause of this contract, or data which are specifically identified in this contract as not subject to this clause.

(c) When data are to be delivered under this clause, the Contractor will be compensated for converting the data into the prescribed form, for reproduction, and for delivery.

(d) The Contracting Officer may release the Contractor from the requirements of this clause for specifically identified data items at any time during the 3-year period set forth in paragraph (a) of this clause.

**3.16 52.227-23 RIGHTS TO PROPOSAL DATA (TECHNICAL). (JUN 1987)**

Except for data contained on pages [ ], it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data - General" clause contained in this contract) in and to the technical data contained in the proposal dated [ ], upon which this contract is based.



## **SECTION IV -- LIST OF ATTACHMENTS**

### **4.1 LIST OF ATTACHMENTS (JAN 1999)**

Attachment A -- Statement of Project Objectives

Attachment B -- Federal Assistance Reporting Checklist

Attachment C -- Budget Page(s)

Attachment D -- Recipient Acquired Property

#### **4.2 ATTACHMENT A -- STATEMENT OF PROJECT OBJECTIVES-UNDEFINED (JAN 1999)**

The Statement of Project Objectives shall be inserted on this page upon award.

**The applicant must prepare the Statement of Project Objectives and include it as an Appendix to Volume II - Technical Application. Instructions for preparation of this document can be found in Section VI.**

The format should be similar to the following.

- A. Objectives
- B. Scope of Project
- C. Tasks to Be Performed
- D. Deliverables

The Recipient shall provide reports in accordance with the enclosed Federal Assistance Reporting Checklist and the instructions accompanying the Checklist. In addition to the reports identified on the Reporting Checklist, the Recipient shall provide the following:

[ ]

#### 4.3 ATTACHMENT B -- FEDERAL ASSISTANCE REPORTING CHECKLIST (JAN 1999)

NETL F 540.3-1#  
(12/1999) OPI=PS10  
(Previous Editions Obsolete)

### FEDERAL ASSISTANCE REPORTING CHECKLIST

<b>1. Awardee:</b> TBD	<b>2. Identification Number:</b> Program Solicitation DE-PS26-00NT40775																																																																																																																
<b>3. Report Submission Address:</b> <i>The requested quantity of all required report deliverables shall be submitted to the following address:</i> <b>NETL AAD DOCUMENT CONTROL BLDG. 921 U.S. DEPARTMENT OF ENERGY NATIONAL ENERGY TECHNOLOGY LABORATORY P.O. BOX 10940 PITTSBURGH, PA 15236-0940</b>																																																																																																																	
<b>4. Planning and Reporting Requirements:</b> <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 50%;"></th><th style="width: 20%;">Form No.</th><th style="width: 10%;">Freq.</th><th style="width: 20%;">Number of Copies</th></tr></thead><tbody><tr><td colspan="4"><b>A. PROGRAM/PROJECT MANAGEMENT</b></td></tr><tr><td><input checked="" type="checkbox"/> Federal Assistance Milestone Plan</td><td>DOE F 4600.3</td><td>O,C</td><td>3</td></tr><tr><td><input checked="" type="checkbox"/> Milestone Log</td><td>DOE F 4600.3A</td><td>Q</td><td>3</td></tr><tr><td><input type="checkbox"/> Federal Assistance Management Summary Report</td><td>DOE F 4600.5</td><td></td><td></td></tr><tr><td><input type="checkbox"/> Federal Assistance Program/Project Status Report</td><td>DOE F 4600.6</td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/> Financial Status Report</td><td>SF-269 or SF-269A</td><td>Q</td><td>3</td></tr><tr><td><input type="checkbox"/> Federal Cash Transaction Report</td><td>SF-272</td><td></td><td></td></tr><tr><td colspan="4"><b>B. TECHNICAL (One paper copy and one PDF electronic file copy)</b></td></tr><tr><td><input checked="" type="checkbox"/> Technical Progress Report</td><td>None</td><td>Q</td><td>2</td></tr><tr><td><input checked="" type="checkbox"/> Topical Report</td><td>None</td><td>A</td><td>2</td></tr><tr><td><input checked="" type="checkbox"/> Final Report</td><td>None</td><td>F</td><td>2</td></tr><tr><td colspan="4"><b>C. ENVIRONMENTAL</b></td></tr><tr><td><input checked="" type="checkbox"/> Hazardous Substance Plan</td><td>None</td><td>O</td><td>3</td></tr><tr><td><input checked="" type="checkbox"/> Hazardous Waste Report</td><td>None</td><td>F</td><td>3</td></tr><tr><td><input type="checkbox"/> Environmental Compliance Plan</td><td>None</td><td></td><td></td></tr><tr><td><input type="checkbox"/> Environmental Monitoring Plan</td><td>None</td><td></td><td></td></tr><tr><td><input type="checkbox"/> Environmental Status Report</td><td>None</td><td></td><td></td></tr><tr><td colspan="4"><b>D. PROPERTY</b></td></tr><tr><td><input checked="" type="checkbox"/> Annual Report of Property in the Custody of Contractors</td><td>F 580.1-8</td><td>A</td><td>1</td></tr><tr><td><input type="checkbox"/> High Risk Property Report</td><td>F 4440.5</td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/> Report of Termination or Completion Inventory</td><td>SF-1428 or SF-120</td><td>FC</td><td>1</td></tr><tr><td colspan="4"><b>E. EXCEPTION</b></td></tr><tr><td><input type="checkbox"/> Conference Record</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/> Hot Line Report</td><td>None</td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/> Journal Articles/Conference Papers and Proceedings</td><td>None</td><td>A</td><td>2</td></tr><tr><td><input type="checkbox"/> Software</td><td>None</td><td>A</td><td>2</td></tr><tr><td><input type="checkbox"/> Other _____</td><td></td><td></td><td></td></tr></tbody></table>			Form No.	Freq.	Number of Copies	<b>A. PROGRAM/PROJECT MANAGEMENT</b>				<input checked="" type="checkbox"/> Federal Assistance Milestone Plan	DOE F 4600.3	O,C	3	<input checked="" type="checkbox"/> Milestone Log	DOE F 4600.3A	Q	3	<input type="checkbox"/> Federal Assistance Management Summary Report	DOE F 4600.5			<input type="checkbox"/> Federal Assistance Program/Project Status Report	DOE F 4600.6			<input checked="" type="checkbox"/> Financial Status Report	SF-269 or SF-269A	Q	3	<input type="checkbox"/> Federal Cash Transaction Report	SF-272			<b>B. TECHNICAL (One paper copy and one PDF electronic file copy)</b>				<input checked="" type="checkbox"/> Technical Progress Report	None	Q	2	<input checked="" type="checkbox"/> Topical Report	None	A	2	<input checked="" type="checkbox"/> Final Report	None	F	2	<b>C. ENVIRONMENTAL</b>				<input checked="" type="checkbox"/> Hazardous Substance Plan	None	O	3	<input checked="" type="checkbox"/> Hazardous Waste Report	None	F	3	<input type="checkbox"/> Environmental Compliance Plan	None			<input type="checkbox"/> Environmental Monitoring Plan	None			<input type="checkbox"/> Environmental Status Report	None			<b>D. PROPERTY</b>				<input checked="" type="checkbox"/> Annual Report of Property in the Custody of Contractors	F 580.1-8	A	1	<input type="checkbox"/> High Risk Property Report	F 4440.5			<input checked="" type="checkbox"/> Report of Termination or Completion Inventory	SF-1428 or SF-120	FC	1	<b>E. EXCEPTION</b>				<input type="checkbox"/> Conference Record				<input checked="" type="checkbox"/> Hot Line Report	None			<input checked="" type="checkbox"/> Journal Articles/Conference Papers and Proceedings	None	A	2	<input type="checkbox"/> Software	None	A	2	<input type="checkbox"/> Other _____			
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<b>5. Frequency Codes and Due Dates:</b> A - As required; for due date of Hot Line Report, Property Reports, and all other reports, see attached text. C - Federal Assistance change/revision, within 15 calendar days after event. F - Final; within ninety (90) calendar days after the project period ends. FC - Final (End of Effort - No Draft); end of effort. M - Monthly; within twenty-five (25) calendar days after end of the report period. O - Once after award; within thirty (30) calendar days after award. Q - Quarterly; within thirty (30) calendar days after end of the calendar quarter or portion thereof. S - Semiannually; within thirty (30) calendar days after end of program half-year. Y - Yearly; 90 calendar days after the end of calendar year.																																																																																																																	
<b>6. Special Instructions:</b> The forms identified in the checklist are available at <a href="http://www.netl.doe.gov/business/forms/forms.html">http://www.netl.doe.gov/business/forms/forms.html</a> . Alternate formats are acceptable provided the contents remain consistent with the form. All <u>technical reports</u> submitted to the DOE <u>must</u> be accompanied by a completed and signed <u>NETL F 2050.4</u> addressing patent information.																																																																																																																	

#### **4.4 GENERAL INSTRUCTIONS FOR THE PREPARATION AND SUBMISSION OF REPORTS (MAY 1999)**

The Recipient shall prepare and submit (postage prepaid) the plans and reports indicated on the "Federal Assistance Reporting Checklist" to the addressee identified on the checklist. The level of detail the Recipient provides in the plans and reports shall be commensurate with the scope and complexity of the effort and shall be as delineated in the guidelines and instructions contained herein. The prime Recipient shall be responsible for acquiring data from any contractors or subrecipients to ensure that data submitted are compatible with the data elements which prime Recipients are required to submit to DOE.

#### **4.5 FEDERAL ASSISTANCE MILESTONE PLAN (DOE F4600.3) AND MILESTONE LOG (DOE F 4600.3A) (MAY 1999)**

The milestone plan is used as a planning tool, establishing the time schedule for accomplishing the planned work. Usually, it is accompanied by the DOE F 4600.3A, "Milestone Log." The Milestone Plan portrays the major milestones of the project in bar chart format. The purpose of the plan is to establish the Recipient's time schedule for accomplishing planned events and milestones. It covers the life of the project and is to be organized by major project activities, such as those performed at work breakdown structure Level 2. Intermediate events and critical milestones are further identified in an attached 'milestone log' and include the identification number, descriptive name of the event or milestone, and the scheduled date of completion.

#### **4.6 FINANCIAL STATUS REPORT (STANDARD FORM 269 OR 269A) (MAY 1999)**

This report is used for the Recipient to provide regular periodic accounting of project funds expended. The accounting may be on either a cash or accrual basis. Actual total expenditures and obligations incurred, but not paid, are reported for each reporting period for each major activity. They should correlate with those identified on the "Federal Assistance Milestone Plan" when the "Federal Assistance Milestone Plan" is required. Provision is made to identify the Federal and non-Federal share of project outlays for each identified activity.

#### **4.7 TECHNICAL REPORTS (DEC 1999)**

**CAUTION:** Technical reports SHALL NOT include limited rights data (such as restricted, proprietary or patentable information). Limited Rights Data shall be submitted in a separate proprietary appendix to the technical report. This appendix SHALL NOT be submitted in an electronic format but rather submitted in ONE ORIGINAL AND THREE (3) PAPER COPIES along with the paper version of the sanitized technical report deliverable. The appendix shall be referenced in, but not included in, the sanitized technical report deliverable under the contract. In accordance with FAR 52.227-14, Rights in Data-General, the appendix must be appropriately marked and identified.

All TECHNICAL REPORTS submitted to the DOE MUST be accompanied by a completed and signed NETL F 2050.4, addressing patent information.

#### **4.8 TECHNICAL PROGRESS REPORT (ANNUAL, QUARTERLY, AND SEMI-ANNUAL) (MAY 1999)**

The body of the report should contain a full account of progress, problems encountered, plans for the next reporting period, and an assessment of the prospects for future progress.

The Technical Progress Report should include sufficient detail to allow the work to be reproduced by others. Results and reduced data shall be presented together with a discussion of the relevance of the findings. When experimental systems and/or procedures are being utilized for the first time, they shall be described in detail. This description shall contain detailed information on equipment and procedures utilized, as well as providing a rationale for their use. All data reduction and transformation methods shall be fully documented. For every fourth calendar quarter for quarterly reports or every second half year for semi-annual reports, the report should be expanded to provide for detailed information on the results of the past year, problems encountered, significant accomplishments, listing of publications, presentations, and approaches to be taken the following year.

Informational items in technical progress reports shall include:

Experimental Apparatus -- A comprehensive description, including dimensioned drawings or sketches, of the apparatus and associated diagnostic measurement equipment employed to perform the experimental research.

Experimental and Operating Data -- All experimental data acquired during the course of research including detailed characterization of the sample materials subjected to experimentation.

Data Reduction -- A complete description of the methods employed to transform raw measured data into a form usable for interpretation along with any assumptions or restrictions inherent in the method and the resultant reduced data.

Hypothesis and Conclusions -- Logic for drawing conclusions or developing hypotheses shall be clearly stated along with applicable assumptions or restrictions.

#### **4.9 FINAL TECHNICAL REPORT (MAY 1999)**

The Final Report shall document and summarize all work performed during the award period in a comprehensive manner. It shall also present findings and/or conclusions produced as a consequence of this work. This report shall not merely be a compilation of information contained in subsequent quarterly, or other technical reports, but shall present that information in an integrated fashion, and shall be augmented with findings and conclusions drawn from the research as a whole.

The Recipient shall deliver a draft copy of the final report thirty (30) days after completion of the project period. The Government shall be allowed thirty (30) days to review the draft copy and to notify the Recipient, in writing, of approval or recommended changes. If the Government does not approve or recommend changes within thirty (30) days of receipt of the draft copy, the report shall be deemed approved. The approved final report is due ninety (90) days after completion of the project period.

#### **4.10 TOPICAL REPORT (MAY 1999)**

These reports usually provide a comprehensive statement of the technical results of the work performed for a specific task or subtask of the Statement of Project Objectives, or detail significant new scientific or technical advances. If required, DOE shall review and approve the report outline prior to submission of the report.

#### **4.11 GUIDELINES FOR ORGANIZATION OF TECHNICAL REPORTS (DEC 1999)**

The following sections should be included (as appropriate) in technical reports in the sequence shown. Any section denoted by an asterisk is required in all technical reports.

TITLE PAGE\* - The Title Page of the report itself must contain the following information in the following sequence:

Report Title  
Type of Report (Quarterly, Semi-Annual, Annual, Topical, Final)  
Reporting Period Start Date  
Reporting Period End Date  
Principal Author(s)  
Date Report was Issued (Month [spelled out] and Year [4 digits])  
DOE Award Number (e.g., DE-FG26-99NT12345) and if appropriate, task number  
Name and Address of Submitting Organization (This section should also contain the name and address of significant subcontractors or subrecipients who participated in the production of the report.)

DISCLAIMER\* -- The Disclaimer must follow the title page, and must contain the following paragraph:

"This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

ABSTRACT\* - should be a brief, concise summary of the report.

TABLE OF CONTENTS\*

LIST(S) OF GRAPHICAL MATERIALS

## INTRODUCTION

**EXECUTIVE SUMMARY** - this should be a well organized summary that highlights the important accomplishments of the research during the reporting period. It should be no less than one page and no more than two pages in length, and should be single spaced. This summary must be more comprehensive than the traditional "abstract."

**EXPERIMENTAL\*** - this should describe, or reference all experimental methods being used for the research. It should also provide detail about materials and equipment being used. Standard methods can be referenced to the appropriate literature, where details can be obtained. Equipment should be described only if it is not standard, or if information is not available thru the literature or other reference publications.

**RESULTS AND DISCUSSION\*** - It is extremely important that this section includes enough relevant data, especially statistical data, to allow the project manager to justify the conclusions. With the relevant data, explain how the data was interpreted and how it relates to the original purpose of the research. Be concise in the discussion on how this research effort solved or contributed to solving the original problem.

**CONCLUSION\*** - The conclusion should not simply reiterate what was already included in the "Results and Discussion" section. It should, however, summarize what has already been presented, and include any logical implications of how the successes are relevant to technology development in the future. This is extremely important, since "relevancy" continues to be a criteria of the program.

**REFERENCES\***  
**BIBLIOGRAPHY**  
**LIST OF ACRONYMS AND ABBREVIATIONS**  
**APPENDICES (IF NECESSARY)**

Company Names and Logos -- Except as indicated above, company names, logos, or similar material should not be incorporated into reports.

Copyrighted Material -- Copyrighted material should not be submitted as part of a report unless written authorization to use such material is received from the copyright owner and is submitted to DOE with the report.

Measurement Units -- All reports to be delivered under this instrument shall use the SI Metric System of Units as the primary units of measure. When reporting units in all reports, primary SI units shall be followed by their U.S. Customary Equivalents in parentheses ( ).

The Recipient shall insert the text of this clause, including this paragraph, in all subcontracts under this award.

Note: SI is an abbreviation for "Le Systeme International d'Unites."

## **4.12 ELECTRONIC MEDIA STANDARD FOR PREPARATION OF TECHNICAL REPORTS (DEC 1999)**

### FILE FORMAT

Production of high-quality, electronic documents is dependent on the quality of the input that is provided. Thus, the Recipient shall submit one good quality paper copy using either permanent or alkaline paper plus an electronic version of each technical report.

ELECTRONIC REPORTS SHALL BE SUBMITTED IN THE ADOBE ACROBAT PORTABLE DOCUMENT FORMAT (PDF). ELECTRONIC REPORTS SUBMITTED IN A FORMAT OTHER THAN ADOBE WILL BE RETURNED AND THE REPORT CONSIDERED DELINQUENT.

Each report shall be an integrated file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts.

### SUBMISSION FORMAT

The electronic file(s) shall be submitted via diskette or CD-ROM. Diskettes or CD-ROMs must be labeled as follows:

DOE Award Number  
Type/Frequency of Report(s)  
Reporting Period (if applicable)  
Name of submitting organization  
Name, phone number and fax number of preparer

Diskettes -- Diskettes must be 3.5" double-sided, high-density (1.4 M Byte capacity). If file compression software is used to transmit a PDF file spanning more than one diskette, PKZIP from PKWare, Inc., is the required compression software. State the number of diskettes in the set (e.g., 1/3)

CD-ROM -- The electronic file(s) may be submitted on an ISO9660-format CD-ROM.

#### FILE NAMING

In naming the electronic file, the Recipient shall use the standard eight-character naming convention for the main file name, and the three character extension applicable to the software use, e.g., .pdf for Adobe.

For the main file name, the first five characters are the last five digits from the award number; e.g., for Award Number DE-FG26-97NT12345, the first five characters are 12345.

The next character represents the technical report and will always be designated as "R".

The remaining two characters indicate the chronological number of the particular type of report; e.g., Quarterly Technical Progress Reports for a 5-year award are numbered R01 through R20. Thus, the main file name for the sixth Quarterly Technical Progress Report under Award No. DE-FG26-99NT12345 would be 12345R06.PDF. If monthly, quarterly, annual, and a final technical report are required, the numbers would run from R01 through R86 (60 monthly reports, 20 quarterly reports, 5 annual reports, and 1 final report).

#### **4.13 ENVIRONMENTAL (DEC 1999)**

In response to the requirements of the National Environmental Policy Act of 1969 (NEPA) and other related environmental statutes, the National Energy Technology Laboratory (NETL) requires the submission of various documents that assess the environmental aspects and projected impacts of all of its proposed actions. These documents may include the following: (1) Hazardous Substance Plan, (2) Hazardous Waste Report, (3) Environmental Compliance Plan, (4) Environmental Monitoring Plan, and (5) Environmental Status Reports.

The environmental information provided in these documents will enable NETL to fulfill its responsibilities under NEPA (additional information about the requirements of the National Environmental Policy Act can be found in the DOE NEPA Compliance Guide and 10 CFR 1021) and to monitor the Recipient's compliance with other environmental regulations. The implementation of any task associated with a proposed action will be dependent upon DOE completing necessary NEPA documentation. Therefore, to minimize the risk of project delays, it is imperative that these reports be submitted in a timely manner.

The information contained herein specifies the basic environmental requirements for this award, but it is not to be interpreted as containing all necessary information for any given project. Likewise, certain aspects of the requirements may not be applicable. Accordingly, the level of information provided should be sufficient for DOE to assess the environmental implications of the proposed action.

#### **4.14 HAZARDOUS SUBSTANCE PLAN (MAY 1999)**

The Recipient shall submit a Hazardous Substance Plan not later than thirty (30) days after initial award. The Plan shall specifically identify each Hazardous Substance (as defined under 40 CFR 261, Subpart D, entitled Lists of Hazardous Wastes) anticipated to be purchased, utilized or generated in the performance of this award. For each such Hazardous Substance identified, the Plan shall specifically provide the following information:

- Description of Substance/Chemical
- EPA Hazardous Waste Number
- EPA Hazard Code
- Anticipated Quantity to be purchased, utilized or generated
- Anticipated Hazardous Waste Transporter
- Anticipated Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)
- Anticipated Treatment Method

#### **4.15 HAZARDOUS WASTE REPORT (MAY 1999)**

The Recipient shall submit a Hazardous Waste Report at the completion of award performance. The Report shall specifically identify each Hazardous Waste (as defined under 40 CFR 261, Subpart D, entitled Lists of Hazardous Wastes) actually utilized, or generated in the performance of this award. For each such Hazardous Waste identified, the Report shall specifically provide the following information:

Description of Substance/Chemical  
EPA Hazardous Waste Number  
EPA Hazard Code  
Actual Quantity Disposed  
Actual Hazardous Waste Transporter  
Actual Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)  
Actual Disposal Date  
Actual Treatment Method

The Hazardous Waste Report is intended as a final reconciliation of anticipated versus actual Hazardous Substances purchased, utilized, or generated in the performance of this award.

#### **4.16 PROPERTY REPORTS (DEC 1999)**

The NETL Property Handbook entitled "Management of Government Property in the Possession of Contractors," contains forms, instructions, and suggested formats for submission of property reports. This handbook can be found at <http://www.netl.doe.gov/business/index.html>.

#### **4.17 REPORT OF TERMINATION OR COMPLETION INVENTORY (SF-1428 AND SF-120) (MAY 1999)**

This report submitted on the SF-1428 and SF-120 is due immediately upon completion or termination of the award. The Recipient is required to perform and cause each subcontractor to perform a physical inventory, adequate for disposal purposes, of all Government property applicable to the award.

#### **4.18 HOT LINE REPORT (DEC 1999)**

The "Hot Line Report" may be used to report a major breakthrough in research, development, or design; an event causing a significant schedule slippage or cost growth; an environmental, safety and health violation; achievement of or failure to achieve an important technical objective; or any requirement for quickly documented direction or redirection. The report shall be submitted by the most rapid means available, usually electronic, and should confirm telephone conversations with DOE representatives. Identification as a "Hot Line Report" serves notice at each link in the delivery chain that expedition in handling is required. Unless otherwise agreed by the parties involved, DOE is expected to take action and respond in a similarly timely manner. The report should include:

1. Recipient's name and address;
2. Award title and number;
3. Date;
4. Brief statement of problem or event;
5. Anticipated impacts; and
6. Corrective action taken or recommended.

Hot line reports shall document the incidents listed below:

1. Any single fatality or injuries requiring hospitalization of five or more individuals is to be immediately reported.
2. Any significant environmental permit violation is to be reported as soon as possible, but within 24 hours of the discovery of the incident.
3. Other incidents that have the potential for high visibility in the media are to be reported as quickly as possible, but within 24 hours following discovery.
4. Any failure resulting in damage to Government-owned equipment in excess of \$50,000 is to be reported as quickly as possible, but within 24 hours of the discovery of the failure.
5. Any unplanned event which is anticipated to cause a schedule slippage or cost increase significant to the project is to be reported within 24 hours.
6. Any verbal or written Notice of Violation of any Environmental, Safety, and Health statutes arising from the performance of this award is to be immediately reported.
7. Any accidental spill or release which is in violation of any Environmental, Safety, and Health statutes arising from the performance of this award is to be immediately reported, but within 24 hours of the discovery of the accident.



8. Any incident which causes a significant process or hazard control system failure, or is indicative of one which may lead to any of the above defined incidents, is to be reported as soon as possible, but within 5 days of discovery.

The requirement to submit Hot Line Reports for the incidents identified in 1, 2, 3, 6, or 7 is for the sole purpose of enabling DOE officials to respond to questions relating to such events from the media and other public.

When an incident is reported in accordance with 4, 5, 6, 7, or 8, the Recipient shall conduct an investigation of its cause and make an assessment of the adequacy of resultant action. A written report is required no later than ten (10) calendar days following the incident and shall include an analysis of the pertinent facts regarding the cause, and a schedule of the remedial events and time periods necessary to correct the action.

When an event results in the need to issue a written or verbal statement to the local media, the statement is to be cleared first; if possible, and coordinated with NETL Management and Communications Division, the Contracting Officer Representative (COR) and the Contracting Officer.

#### **4.19 ATTACHMENT C -- BUDGET PAGES (DEC 1999)**

The budget documents (DOE Form 4620.1, er F4620.1A, SF424 or the DOE 4600.4) will be inserted on this page upon award.

**The Applicant must prepare the budget documents and include them in Volume I - Business and Financial Application. These document and instructions for completion of the documents can be found on the NETL Homepage at: <http://www.netl.doe.gov/business/forms/forms.html>.**

#### 4.20 ATTACHMENT D -- RECIPIENT ACQUIRED PROPERTY (AUG 1999)

Recipient acquired property will be listed on this page upon award

Item No.

Description

Est. Cost

## **SECTION V -- CONDITIONS AND NOTICES**

### **5.0 INTENTION TO PROPOSE (FEB 1998)**

To enable DOE to anticipate the number of applications to be evaluated, please complete the information contained in the Intention to Propose document located in Appendix A of this document and return via mail, e-mail or fax to the addressee identified in notice 5.13 below.

### **5.1 NUMBER AND TYPE OF AWARDS (JAN 2000)**

It is anticipated that there will be 2-4 awards in each of the Topics A, B, C, and D with each in the form of Financial Assistance-cost sharing Cooperative Agreements and 8-10 awards for Topic E in the form of cost sharing Grants resulting from this solicitation. However, the Government reserves the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this solicitation and will award that number of financial assistance instruments which serves the public purpose and is in the best interest of the Government.

### **5.2 COST SHARING REQUIREMENTS (DEC 1999)**

In accordance with 10 CFR 600.30, the DOE has determined that a minimum cost share for this project is twenty percent (20%) for Budget Period I, and a minimum cost share for Budget Period II of fifty percent (50%). Topic E is only a one budget project and shall require a minimum of 20% cost share.

### **5.3 CONTENT OF RESULTING AWARD (JULY 1999)**

Any agreement awarded as a result of this solicitation will contain Sections I-IV of this solicitation and shall be subject to the terms and conditions addressed therein, as applicable.

Blank areas appearing in this solicitation, indicated by "[TBD]" will be completed after negotiations.

### **5.4 APPLICATION PREPARATION COSTS (DEC 1999)**

This solicitation does not obligate the Government to pay any costs incurred in the preparation and submission of applications, or in making necessary studies or designs for the preparation thereof or to acquire, or contract for any services.

### **5.5 COMMITMENT OF PUBLIC FUNDS (AUG 1999)**

The Contracting Officer is the only individual who can legally commit the Government to the expenditure of public funds in connection with the proposed award. Any other commitment, either explicit or implied, is invalid.

### **5.6 AVAILABILITY OF FUNDS (AUG 1999)**

Subject to the availability of funds, estimated project costs are \$1.0 M to \$3.0 M each for projects in Topic A, C, and D. Topic B has an estimated range of project costs of \$1.5 M to \$9.0 M each. Topic E has an estimated cost of \$100,000 to \$150,000 per project.

### **5.7 PRE-APPLICATION CONFERENCE IS NOT PLANNED (JULY 1999)**

A pre-application conference is not contemplated.

### **5.8 FALSE STATEMENTS (AUG 1999)**

Applications must set forth full, accurate, and complete information as required by this solicitation. The penalty for making false statements in applications is prescribed in 18 U.S.C. 1001.

### **5.9 AMENDMENTS TO SOLICITATION (DEC 1999)**

The only method by which any term of this solicitation may be amended is by an express, formal amendment generated by the issuing office. No other communication, whether written or oral will amend or supersede the terms of this solicitation.

Amendments to the solicitation will be posted on NETL's website @ <http://www.netl.doe.gov/business/solicit/>.

## **5.10 CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER (CFDA) (AUG 1999)**

81.079 - Biomass Energy Technology

## **5.11 APPLICANT ELIGIBILITY (AUG 1999)**

All responsible individuals, corporations, non-profit organizations, educational institutions, and state or local governments may submit applications for consideration. Eligibility of recipients for awards under Topic E, Cofiring Partnerships at Colleges and Universities, is limited to U. S. universities, colleges, and university-affiliated research institutions.

## **5.12 PARTICIPATION BY FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS (FFRDC) AND DEPARTMENT OF ENERGY (DOE) MANAGEMENT AND OPERATIONS (M&O) CONTRACTORS (JAN 2000)**

### **A. Proposed Use of a DOE M&O Contractor**

Applications submitted by, or substantially relying upon the technical expertise of, FFRDCs and DOE M&O contractors are not desired, will not be evaluated, and will not be eligible for an award under this solicitation. Applicants are encouraged to maximize the use of private sector organizations in the performance of the proposed effort. However, an application that includes performance by an FFRDC or DOE M&O contractor(s) as a subcontractor will be evaluated and may be considered for award, provided that: (1) the proposed use of any such entities is specifically authorized by the cognizant agency for the FFRDC or DOE for DOE M&O contractors, in accordance with the procedures established for the FFRDC or the M&O contractor; (2) the work is not otherwise available from the private sector; and (3) the estimated cost of the FFRDC or M&O contractor work does not exceed 25 percent of the total estimated project cost. DOE reserves the right to fund the work through a DOE field work proposal or an interagency agreement.

### **B. Application Submission Requirements**

In addition to the application information to be provided by the applicant as set forth in other parts of this Section V, the following requirements apply:

#### **1. Justification.**

The applicant shall submit a letter with its application (Volume I) which states that to the best of its knowledge, the work requested will not place the FFRDC or the DOE M&O contractor in direct competition with the domestic private sector, and that the proposed scope of work cannot be performed by any private entity.

#### **2. Work Scope.**

The applicant shall submit a detailed scope of work which clearly identifies that portion of the proposed effort for which the expertise and ability to perform lie solely with the DOE M&O contractor. This detailed scope of work shall be provided as an appendix to the Volume II, Technical Application.

#### **3. Cost Information.**

The applicant shall provide cost information for that portion of the proposed work scope (see 2, above) to be performed by the DOE M&O contractor. The cost information shall be furnished in the same format and level of detail as prescribed for subcontractors. The estimated cost of the effort shall be clearly identified in the Volume I, Business and Financial Application.

#### **4. Authorization from the DOE Contracting Officer**

The applicant must submit a document from the DOE Contracting Officer or authorized designee stating that the M&O contractor is authorized to participate in the proposed effort.

## **5.13 TIME, DATE AND PLACE APPLICATIONS ARE DUE (DEC 1999)**

Applications shall be submitted in paper media in sealed envelopes or packages addressed to the office and point of contact specified below:

**APPLICATIONS MUST BE RECEIVED AT THE FOLLOWING MAILING ADDRESS NO LATER THAN  
April 4, 2000, 4:00 P.M. EST.**

Dona G. Sheehan  
U. S. Department of Energy  
National Energy Technology Laboratory  
P. O. Box 10940, MS 921-120  
626 Cochrans Mill Road  
Pittsburgh, PA 15236-0940

Point of Contact: Dona G. Sheehan  
Telephone Number: (412)386-5918  
Fax Number: (412)386-6137  
E-MAIL Address: sheehan@netl.doe.gov  
Contracting Officer: Richard D. Rogus

**External Marking of Applications**

Applications shall be marked with the following information:

- (1) Address of Proposer
- (2) Solicitation Number
- (3) Due Time and Date of Applications
- (4) Point of Contact at Issuing Office

**5.14 FEE AND PROFIT (JULY 1999)**

Fee or profit will not be paid to the recipients of financial assistance awards resulting from this solicitation.

**5.15 DETERMINATION OF RESPONSIBILITY (AUG 1999)**

DOE will evaluate the potential Recipient's responsibility before award. Responsibility determinations are focused on the Recipient's capability to manage and account for the funds, property and other assets provided to perform satisfactorily under the terms of the award. If a potential Recipient is determined to not be in compliance or cannot or will not comply with generally applicable requirements (see 10 CFR Part 600, Appendix A), the contracting officer will find the Recipient not responsible and may either disapprove the application or use special restrictive conditions as a term of award.

**5.16 TREATMENT OF PROPRIETARY INFORMATION (AUG 1999)**

An application may include technical data and other data, including trade secrets and/or privileged or confidential commercial or financial information, which the applicant does not want disclosed to the public or used by the Government for any purpose other than application evaluation. To protect such data, the applicant should specifically identify each page including each line or paragraph thereof containing the data to be protected and mark the cover sheet of the application with the following Notice as well as referring to the Notice on each page to which the Notice applies:

**NOTICE OF RESTRICTION ON DISCLOSURE AND USE OF DATA**

The data contained in pages [     ] of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data therein to the extent provided in the award. This restriction does not limit the Government's right to use or disclose data obtained without restriction from any source, including the applicant.

DOE shall not refuse to consider an application solely on the basis that the application is restrictively marked.

**5.17 TELEGRAPHIC AND E-MAIL APPLICATIONS (AUG 1999)**

Telegraphic applications will **NOT** be considered although applications may be amended by telegraphic notice provided such notice is received prior to the date and time specified for receipt. The term "Telegraphic" includes both mailgrams and facsimile submissions. Applications submitted by E-mail or other electronic means will **NOT** be considered.

#### **5.18 LATE APPLICATIONS, AMENDMENTS AND WITHDRAWALS OF APPLICATIONS (JAN 2000)**

An application or amendment of an application shall be timely if it is received at the location on or before the deadline date and time specified in this section.

Applications or amendments of applications may be withdrawn by written notice at any time before award. Written notice includes E-mails and facsimiles. An authorized representative may withdraw applications in person, if the representative's identity is made known and the representative signs a receipt for the application before award.

#### **5.19 EVALUATION PERSONNEL (AUG 1999)**

Applications will be evaluated in accordance with the criteria set forth in Section VII of the solicitation. In conducting this evaluation, the Government may utilize, in accordance with the requirements of 10 CFR Part 600, assistance and advice from qualified personnel from other Federal Agencies, DOE Contractors, universities and industry. Applicants shall indicate in Volume I if they do not wish to have their applications evaluated by nonfederal personnel. Applicants are further advised that DOE may be unable to consider an application withholding such consent.

#### **5.20 DOE TREATMENT OF APPLICATION INFORMATION (JULY 1999)**

When using personnel from other Federal agencies, DOE contractors, or other consultants to DOE in the evaluation of applications, DOE will obtain assurances from all evaluators that DOE's commitments are met relating to the proprietary nature of any application information.

#### **5.21 APPLICATION CLARIFICATION (JULY 1999)**

DOE reserves the right to require applications to be clarified or supplemented to the extent considered necessary either through additional written submissions or oral presentations.

#### **5.22 AWARD WITHOUT DISCUSSIONS (AUG 1999)**

Notice is given that award may be made after few or no exchanges, discussions or negotiations. Therefore, all applicants are advised to submit their most favorable application to the Government.

#### **5.23 GOVERNMENT RIGHT TO REJECT OR NEGOTIATE (JULY 1999)**

The Government reserves the right, without qualification, to reject any or all applications received in response to this solicitation and to select any application, in whole or in part, as a basis for negotiation and or award.

#### **5.24 ANTICIPATED SELECTION AND AWARD DATES (AUG 1999)**

It is anticipated that selections and awards will be made in the third quarter of the government fiscal year.

#### **5.25 NOTIFICATION TO UNSUCCESSFUL APPLICANTS (AUG 1999)**

Written notice will be provided to unsuccessful applicants after selection in accordance with 10 CFR 600.19. Information about selected projects will be made publicly available.

#### **5.26 APPLICATION ACCEPTANCE PERIOD (AUG 1999)**

The minimum application acceptance period shall be 180 calendar days after the deadline(s) for receipt of applications.

#### **5.27 DISPOSITION OF APPLICATIONS (AUG 1999)**

Applications will not be returned unless they are timely withdrawn.

#### **5.28 PRESUBMISSION REVIEW AND CLEARANCES (AUG 1999)**

Presubmission review under Executive Order 12372, "Intergovernmental Review of Federal Programs" is not required.

#### **5.29 PROJECT PERIOD (AUG 1999)**

The Government anticipates the project period for the subject awards to be twelve (12) months for Budget Period I and a 24-30 month duration for Budget Period II. Awards will have project and budget periods that are

specific to the project and funding. Awards longer than one year will include continuation periods which will be subject to the availability of funds.

### **5.30 SIMPSON-CRAIG AMENDMENT (AUG 1999)**

Organizations which are described in section 501(c)(4) of the Internal Revenue Code of 1986 and engage in lobbying activities after December 31, 1995, shall not be eligible for the receipt of Federal funds constituting an award, grant, or loan. Section 501(c)(4) of the Internal Revenue Code of 1986 covers:

“Civic leagues or organizations not organized for profit but operated exclusively for the promotion of social welfare, or local associations of employees, the membership of which is limited to the employees of a designated person or persons in a particular municipality, and the net earnings of which are devoted exclusively to charitable, educational or recreational purposes.”

Lobbying activities are defined broadly to include, among other things, contacts on behalf of an organization with specified employees of the Executive Branch and Congress with regard to Federal legislative, regulatory and program administrative matters.

### **5.31 LOANS NOT AVAILABLE (JULY 1999)**

Loans are not available under the DOE Minority Economic Impact (MEI) loan program, 10 CFR Part 800, to finance the cost of preparing a financial assistance application.

### **5.32 DEBRIEFINGS (AUG 1999)**

Each unsuccessful applicant will be offered the opportunity for an explanation or debriefing as to why the application was not selected. Debriefings will be conducted at the earliest feasible time.

### **5.33 ADDITIONAL ELIGIBILITY REQUIREMENTS OF THE ENERGY POLICY ACT OF 1992 (JULY 1999)**

Awards under this solicitation also are subject to the eligibility requirements stated in Section 2306 of the Energy Policy Act of 1992 (EPAct). An applicant private sector firm shall be eligible to receive financial assistance under this section only if it is a United States-owned company, or the firm is incorporated in the United States and has a parent company which is incorporated in a country which affords to United States-owned companies: (1) opportunities comparable to those afforded to any other company to participate in any joint venture similar to the one described in this solicitation; and (2) adequate and effective protection for United States companies' intellectual property rights.

In addition, the applicant must show that the project, as a whole, is in the economic interest of the United States. To fulfill this requirement, the applicant must consider the contributions of all participants in the project, including any contractors or suppliers that the applicant has named and relied upon in its application. This can be evidenced by: (1) investment in the United States in research, development, and manufacturing, such as the manufacture of major components or subassemblies in the United States; (2) significant contributions to employment in the United States; (3) agreement with respect to any technology arising from assistance provided under this solicitation to promote the manufacture within the United States of products resulting from that technology, taking into account the goals of promoting the competitiveness of United States industry, and to procure parts and materials from competitive suppliers.

All applicants shall complete documentation providing a certification of eligibility under Section 2306 of the EPAct. Based on the information received, a determination by DOE that the EPAct eligibility requirements are met should be made prior to award of an agreement.

### **5.34 NATIONAL ENVIRONMENTAL POLICY ACT STRATEGY (DEC 1999)**

The National Environmental Policy Act of 1969 (NEPA) establishes a national policy to ensure that consideration is given to environmental values and factors in Federal planning and decision making. The Department of Energy's policy is to comply fully with the letter and spirit of NEPA. To ensure that environmental factors are considered in the decision making process and to promote environmentally responsible decisions, DOE incorporates NEPA requirements early in the planning process for proposed actions. Consistent with Council on Environmental Quality (CEQ) NEPA regulations (40 CFR Parts 1500-1508) and DOE NEPA regulations (10 CFR Part 1021), an overall strategy for compliance with NEPA has been developed. This includes performing project-specific environmental reviews under 10 CFR 1021.216 of environmental issues pertinent to each proposed project before projects are selected, followed by site-specific environmental reviews under NEPA of each project after DOE selection. It is probable that most, if not all, of the projects proposed under this solicitation will not have a significant effect on the environment, and as such, in accordance with DOE NEPA regulations, will be candidates for "categorical exclusions" (CX) and thus will not require the preparation



of an environmental assessment or environmental impact statement. A CX is prepared for actions that obviously do not have a significant environmental impact. To qualify for a CX, a project must be an excluded action and meet certain site-specific criteria. These criteria concern adverse effects on flood plains, wetlands, archeological sites, Indian lands, etc. For further information on categorical exclusions, see 10 CFR Part 1021.410.

No action taken by DOE with regard to any application prior to the completion of the site-specific analysis, including project selection or award, shall be a final decision for purposes of compliance with NEPA.

### **5.35 PRE-SELECTION PROJECT-SPECIFIC ENVIRONMENTAL QUESTIONNAIRE (DEC 1999)**

For Applications that undergo comprehensive evaluation, DOE will review under 10 CFR 1021.216, project-specific environmental information supplied by the applicant on the Environmental Questionnaire which is submitted as part of Volume I, Business and Financial application. The environmental information provided by the applicant is independently evaluated by DOE and documented in the form of an environmental critique, which may also include supplemental information developed by DOE. Subsequently, DOE prepares a publicly available environmental synopsis to document the consideration given to environmental factors and to record that the relevant environmental consequences of reasonable alternatives have been evaluated in the selection process.

### **5.36 POST-SELECTION ENVIRONMENTAL REVIEW (DEC 1999)**

Soon after selection, which shall be contingent as specified in 10 CFR 1021.216(i), depending on the information necessary to satisfy NEPA, applicants may be requested to provide additional environmental information which is more detailed than that provided on the Environmental Questionnaire of this solicitation. This detailed site-and project-specific information may be used as the basis for site-specific NEPA documents prepared by DOE for each selected project. Such NEPA documents shall be prepared, considered, and published by DOE in full conformance with the requirements of the CEQ regulation and DOE NEPA regulations. DOE must complete its appropriate NEPA process before a go/no go decision and before a recipient may proceed with detailed design under the award.

### **5.37 POST-AWARD ENVIRONMENTAL MONITORING (DEC 1999)**

Each resulting award will specify the monitoring and reporting requirements necessary to ensure compliance with applicable environmental regulations, and permits obtained from Federal, state and local government agencies and DOE NEPA regulations.

### **5.38 52.227-6 ROYALTY INFORMATION. (APR 1984)**

(a) Cost or charges for royalties. When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:

- (1) Name and address of licensor.
- (2) Date of license agreement.
- (3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
- (4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.
- (5) Percentage or dollar rate of royalty per unit.
- (6) Unit price of contract item.
- (7) Number of units.
- (8) Total dollar amount of royalties.

(b) Copies of current licenses. In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

#### **5.39 952.227-84 NOTICE OF RIGHT TO REQUEST PATENT WAIVER. (FEB 1998)**

Offerors have the right to request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of the contract that may be awarded as a result of this solicitation, in advance of or within 30 days after the effective date of contracting. Even where such advance waiver is not requested or the request is denied, the contractor will have a continuing right under the contract to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the contract. Domestic small businesses and domestic nonprofit organizations normally will receive the patent rights clause at DEAR 952.227-11 which permits the contractor to retain title to such inventions, except under contracts for management or operation of a Government-owned research and development facility or under contracts involving exceptional circumstances or intelligence activities. Therefore, small businesses and nonprofit organizations normally need not request a waiver. See the patent rights clause in the draft contract in this solicitation. See DOE's patent waiver regulations at 10 CFR part 784.

#### **5.40 UNNECESSARILY ELABORATE APPLICATIONS (JULY 1999)**

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this solicitation are not desired and may be construed as an indication of the applicant's lack of cost consciousness. Elaborate art work, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.

## **SECTION VI -- APPLICATION PREPARATION INSTRUCTIONS**

### **6.1 APPLICATION PREPARATION INSTRUCTIONS -- GENERAL (JULY 1999)**

General. Application content, preparation, and delivery must conform to the solicitation instructions. To aid in evaluation, applications shall be clearly and concisely written as well as being neat, indexed (cross-indexed as appropriate) and logically assembled. All information prescribed by the solicitation package shall be included in the application package. The application shall be prepared as set forth herein to provide a standard basis for evaluation and to insure that each application will be uniform as to format and sequence. These instructions are not to be included in your application.

Applications shall be prepared in accordance with this section. All pages of each part shall be appropriately numbered and identified with the name of the applicant, the date and the solicitation number to the extent practicable. Each volume is a stand alone document, therefore, some information provided may need to be included in both volumes.

Each application should clearly demonstrate the applicant's capability, knowledge, and experience in regard to the requirements described herein. Failure to respond or follow the instructions regarding the organization and content of the application may result in the application being deemed unacceptable.

DOE may return an application that does not include all information and documentation required by statute, 10 CFR Part 600, or the solicitation when the nature of the omission precludes review of the application. During the review of a complete application, DOE may request the submission of additional information if the information is essential to evaluate the application.

### **6.2 OVERALL ARRANGEMENT OF APPLICATION (AUG 1999)**

The overall application shall consist of two (2) physically separated volumes, individually entitled as stated below. Submit the required number of each application volume shown in the matrix below.

<u>VOLUME</u>	<u>ORIGINAL</u>	<u>NUMBER OF COPIES</u>
Volume I -- Business and Financial Application	1	5
Volume II -- Technical Application	1	5

### **6.3 VOLUME I -- BUSINESS AND FINANCIAL APPLICATION PREPARATION INSTRUCTIONS (DEC 1999)**

Volume I, Business and Financial Application, consists of an application coversheet (Appendix B), application forms, assurances, budget pages, supporting cost data requirements, environmental questionnaire, exceptions and deviations to the model award, and any other business and financial information.

The application identified as the original shall contain all original signatures of all documents requiring signatures by the offeror. Use of reproductions of signed originals is authorized in all other copies of the application.

The applicant shall not provide application information in three-ring binders.

#### **Format and Content.**

**ALL FORMS NEEDED FOR PREPARATION OF VOLUME I ARE FOUND ON THE NETL HOMEPAGE AT: <http://www.netl.doe.gov/forms/forms.html>. PLEASE NOTE THAT ALL FORMS WERE DEVELOPED USING WORDPERFECT 6.1 AND FORMATTED FOR PRINTING USING A HP LASERJET III Si PRINTER. INSTRUCTIONS FOR COMPLETION OF THE FORMS ARE CONTAINED ON THE BACK OF EACH FORM. QUESTIONS ON COMPLETION OF THE FORMS SHOULD BE ADDRESSED TO THE CONTRACT SPECIALIST.**

Volume I shall include the following documents (in the order listed):

1. VOLUME I - BUSINESS AND FINANCIAL APPLICATION COVERSHEET (Appendix B)

The Application Coversheet for Volume I shall be provided with each copy of Volume I.

2. APPLICATION FOR FEDERAL ASSISTANCE Standard Form 424# -- **Form # SF424**
3. FINANCIAL ASSISTANCE ASSURANCE PACKAGE -- **Form #: assure.fa**

4. BUDGET PAGE(S)

The applicant must provide a detailed budget information on one or more of the following budget forms. Supporting cost data shall be submitted as indicated by the instructions.

Failure to provide the detailed cost information as described in the instructions will result in an incomplete package. If a minimum cost share is required by this solicitation, the applicant shall stipulate in the application the source and amount of cost sharing and the value of third party in-kind contributions proposed to meet the requirement.

- a. Federal Assistance Budget Information -- DOE F 4600.4 -- **Form #D4600.4**
- b. Budget Page DOE F 4620.1 -- **Form # D4620.1**
- c. Grant Application Project Period Summary ER F 4620.1A -- **Form #ERF4620**
- d. Budget Information -Non-Construction Programs -- SF424a -- **Form #SF424a**

5. SUPPORTING COST DATA REQUIREMENTS FOR APPLICANTS OTHER THAN UNIVERSITIES

- a) Personnel: Personnel cost shall be supported by a matrix identifying labor categories, hours proposed, hourly rates and cost on a per task and total budget period basis and total project.
- b) Fringe Benefits and Indirect Charges: Include the major base and pool expense groupings (for indirects such as fringe, overhead, and G&A) by line item and dollar amount. This shall be prepared from the offeror's most recently completed Fiscal Year, the current Fiscal Year, and the estimate for the next Fiscal Year. The applicant may substitute a Government approved written indirect rate agreement if such agreement contains rates that cover the period of performance.
- c) Travel: Travel shall be supported by a matrix identifying number of trips, locations to be visited, number of persons traveling, transportation cost, per diem cost, and total budget.
- d) Equipment: List each item, its cost, and reason it is needed for the project.
- e) Supplies: Indicate types required and estimated costs and reason it is needed for the project.
- f) Contractual: Detail all subcontract and consultant costs. Subcontracts/Consultants must be supported in the same level of detail as the applicant's costs, on a per task and total budget period basis.

6. ENVIRONMENTAL QUESTIONNAIRE -- **Form # nepasol**

7. ACKNOWLEDGMENT OF AMENDMENTS

The applicant shall specifically indicate their acknowledgment and receipt of the amendment(s) posted on the NETL Website at <http://www.netl.doe.gov/business/solicit/> by signing the amendment and including it in Volume I or stating the receipt of the amendment in the text of Volume I.

8. ADDITIONAL APPLICATION SUBMISSION REQUIREMENTS FOR FFRDC'S, DOE M&O CONTRACTORS OR LABORATORY ENTITIES

In addition to the application information to be provided by the applicant as set forth in other parts of this Section, the following additional requirements apply for Federally Funded Research and Development Centers (FFRDC's), DOE M&O Contractors, and/or laboratory entities :

1. Justification.

The offeror shall submit a letter with its application (Volume I) which states that to the best of its knowledge, the work requested will not place the FFRDC or the DOE M&O contractor in direct competition with the domestic private sector, and that the proposed scope of work cannot be performed by any private entity.

2. Work Scope.

The offeror shall submit a detailed scope of work which clearly identifies that portion of the proposed effort for which the expertise and ability to perform lie solely with the DOE M&O contractor, FFRDC's or laboratory. This detailed scope of work shall be provided as an appendix to the Volume II, Technical Application.

3. Cost Information.

The offeror shall provide cost information for that portion of the proposed work scope (see 2, above) to be performed by the DOE M&O contractor. The cost information shall be furnished in the same format and level of detail as prescribed for subcontractors. The estimated cost of the effort shall be clearly identified in the Volume I, Business and Financial Application.

8. EXCEPTIONS AND DEVIATIONS TAKEN TO THE MODEL AGREEMENT

The applicant shall identify and explain any exceptions or deviations taken or conditional assumptions made with respect to the model agreement, the requirements of this Section, and other matters associated with this solicitation.

Any exceptions taken must contain sufficient amplification and justification to permit evaluation. The benefit to the Government shall be explained for each exception taken. Such exceptions will not, of themselves, automatically cause an application to be termed unacceptable. A large number of exceptions, or one or more significant exceptions not providing benefit to the Government, however, may result in rejection of your application(s) as unacceptable.

NOTE: Applicants are specifically directed to review Section III, Intellectual Property Provisions, of the model cooperative agreement.

9. SUMMARY OF EXCEPTIONS AND DEVIATIONS TAKEN IN OTHER VOLUMES

The offeror shall summarize each technical, cost, business, or other exceptions taken elsewhere, and provide specific cross references to its full discussion.

**6.4 VOLUME II-- TECHNICAL APPLICATION PREPARATION INSTRUCTIONS (AUG1999)**

The Volume II - Technical Application, Proposal Cover sheet

The Application Coversheet for Volume I shall be provided with each copy of Volume I.

The proposer shall include a technical discussion in the format specified below. This format relates to the technical evaluation criteria found in Section VII. Alternate heading names and additional headings may be included as desired.

In order to produce a comprehensive application for this solicitation, the applicant should address, at a minimum, the areas listed below. To help facilitate the review process and to insure addressing all the review criteria, the applicant shall use the following Table of Contents when preparing the technical application.

## TABLE OF CONTENTS

	<u>Page</u>
PUBLIC ABSTRACT .....	i
TABLE OF CONTENTS .....	ii
List of Tables .....	iii
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GENERAL TECHNICAL INFORMATION (Limited to 40 pages total)	
1.0 Background & Summary .....	1
- Short objectives and concise project description (for both phases if applicable) .....	#
2.0 Discussion/Understanding of Pertinent Issues .....	#
- What has been done in the area of the applicant's proposed project .....	#
- What are the issues remaining to be resolved .....	#
- Technical .....	#
- Environmental .....	#
- Economic .....	#
- Infrastructure/ Fuel Supply and Ability to Adapt to Alternative Fuel .....	#
3.0 Merits of the Proposed Activity (both phases if applicable) .....	#
- Energy Benefits and Impacts .....	#
- Environmental Benefits and Impacts .....	#
- Economic Benefits and Impacts .....	#
- Infrastructure or Fuel Supply Benefits and Impacts .....	#
- Project Sustainability and Opportunities for Replication .....	#
4.0 Approach to Achieving Objectives of Topic Area .....	#
- Detailed Project Description including system diagrams, hardware sketches, etc .....	#
- Statement of Work .....	#
- Work Breakdown Structure .....	#
- Rationale & Logic Diagram showing interrelationships between tasks and phases .....	#
- Milestone Schedule with Decision Points .....	#
5.0 Adequacy of Participants Roles, Capabilities, Facilities and Organization .....	#
- Management Experience and Strategy .....	#
- Responsibilities, Qualifications and Time Commitment of Key Project Personnel .....	#
- Organizational Role, Experience in Relevant Areas and Corporate Commitment .....	#
Total ≤ 40 Pages	
APPENDICES (not counted in the 40-page limit)	
A. STATEMENT OF PROJECT OBJECTIVES .....	A1
B. RESUMES .....	B1
C. ADDITIONAL PERTINENT PUBLICATIONS (if any) .....	C1
D. TECHNICAL EXCEPTIONS AND DEVIATIONS .....	D1

### **6.5 PUBLIC ABSTRACT (JULY 1999)**

This section shall contain a public abstract of not more than one (1) typewritten page clearly stating the objectives of research, the title of the project, methodology, and sponsoring organization (s). It is a stand-alone document. This abstract may be released to the public by DOE in whole or in part any time. It is, therefore, required that it shall not contain proprietary data or confidential business information.

### **6.6 GENERAL TECHNICAL INFORMATION (DEC 1999)**

The technical application will consist of the applicant's outline addressing the technical and management aspects of the assistance action, the applicant's capabilities and what the applicant will do to satisfy the requirements of the Statement of Project Objectives. Since the technical information contained in this section will be evaluated to determine such matters as understanding of the work to be performed, technical approach,

and potential for completing the desired work, it should be specific and complete in every detail. The application should be practical and be prepared simply and economically, providing a straightforward, concise delineation of what it is the applicant will do to satisfy the requirements of the Statement of Project Objectives.

In order that the Technical Application may be evaluated strictly on the merit of the material submitted, no cost information is to be included in the Technical Application. Where estimated man-hours will provide clarity, they shall be quoted in man-hour figures only, with no indication as to the cost of these man-hours.

The application shall not merely offer to perform work in accordance with the Statement of Project Objectives but shall describe the actual work proposed.

The Technical Application shall not exceed **40** pages. The application shall contain only single-sided pages. The statement of project objectives, resumes and additional pertinent publications are to be attachments to the Technical Application and will not be included in the page limitation. Pages in excess of the page limitation will be removed from the application, discarded prior to evaluation, and will not be evaluated. The proposed text shall be typed, single spaced, using Elite size (12 pitch) type (or computer font equivalent) and printed, unreduced on size 8 1/2-inch by 11-inch paper. Illustrations shall be legible and no longer than 11-inch by 17-inch foldouts, as appropriate for the subject matter. Each 11-inch by 17-inch foldouts is considered two pages when determining the number of pages. Pages of each volume shall be sequentially numbered with the volume and page numbers on each page. Except as otherwise noted in the solicitation, the page guidelines previously set forth constitute a limitation on the total amount of material that may be submitted for evaluation. No material may be incorporated in any application by reference as a means to circumvent the page limitation.

#### **The applicant shall provide the technical information as follows:**

##### **Technical Discussion**

In order that the Technical Application may be evaluated strictly on the merit of the material submitted, no cost information is to be included in the Technical Application. Where estimated man-hours will provide clarity, they shall be quoted in man-hour figures only, with no indication as to the cost of these man-hours.

This section shall contain the major portion of the Technical Proposal. It shall be presented in as much detail as practical and the applicant shall provide the technical information as follows:

##### **Project Background/Discussion/Understanding**

Applicants should consider and provide a comprehensive discussion that addresses the following factors:

- (1) a review of the developmental history or background of the proposed technology
- (2) complete and detailed project description and the perceived technical feasibility of the project (based on sound scientific and engineering principles)
- (3) the degree to which the proposed technology or methodology, if successfully developed as proposed, represents an important advancement towards achieving the objectives of the topic area
- (4) the ability of the technology to perform adequately in spite of potential variation in availability, reliability of supply, seasonality, handling, storage requirements, and composition of the biomass feedstock
- (5) extent to which the project verifies the use of biomass power technologies and feedstock supply systems

##### **Merits of Proposed Activity (both phases if applicable)**

###### Energy, Environmental, and Economic Benefits and Barriers

Applicants shall provide a discussion of the economic viability of the proposed system and potential benefits to the domestic biomass power market. To the extent possible, this should include a discussion and description of the magnitude of the demonstrated economic benefits including waste reduction, nutrient recycling, and reduction in greenhouse gas emissions. A discussion of the perceived benefits that the technology will provide to the industry and nation in the energy and environmental areas should be provided. The applicant shall also provide a comprehensive discussion of barriers that could impede the project success and plans to overcome them.

###### Sustainability and Replication

Applicants shall provide a discussion of a plan for maintaining the system(s) following the end of the project. Evidence of past or current commercialization projects should be provided. Applicants shall also provide evidence for potential replication and market penetration of the system. Provide the identification of, and commitment to, a viable mechanism, plan, or path to transfer of the technology to industry at the earliest practicable time.

##### **Approach to Achieving Objectives of Topic Area**

The proposing applicant shall provide a comprehensive discussion that addresses the following factors:

- (1) a detailed project description including system diagrams, hardware sketches, etc.
- (2) a complete description of tests and analysis needed to proceed along each step
- (3) the level and technical quality of the plans for purchasing or harvesting, transporting, and processing of biomass feedstock
- (4) the level and technical quality of the plans for the design, installation, permitting, operation, and maintenance of the conversion facility

Also, a Statement of Work (SOW) shall be provided that allows an evaluator to determine the quality, quantity, completeness, and realism of the work being proposed. The proposed SOW shall clearly describe and support in narrative form the work to be performed including 1) details regarding the type, size, and availability of equipment to be used, the quality of the expected data, the plan for evaluating the effectiveness of the proposed technology, process, or concept, the reality of the operating conditions, the number of variable and levels to be tested, the length of the test run period, and sampling and sample analysis schemes, 2) a detailed project and milestone schedules and a work breakdown structure (WBS), 3) a labor distribution plan, 4) a detailed description of how facilities, equipment, and support personnel or other resources will be applied to the proposed SOW, and 5) a rationale and logic diagram showing interrelationships between tasks and phases (if applicable).

### **Applicant and Participant Roles, Capabilities and Organization, and Facilities**

The proposing applicant shall describe its capabilities by including discussions that:

- (a) describe the credentials, capabilities, and experience of key personnel by including, in an appendix, resumes and other information consistent with and appropriate to the role each will play in the proposed project, including major subcontractors;
- (b) document the relevant corporate experience of participating organizations and the rationale for and corporate commitment to any teaming arrangement;
- (c) contain a project organization chart that delineates the responsibilities and lines of authority among the team organization as well as the roles of key personnel and the percentage of time they will be dedicated to the project;
- (d) document that resources are/or facilities are available to accommodate the proposed project (corporate commitment).

## **6.7 STATEMENT OF PROJECT OBJECTIVES INSTRUCTIONS (DEC 1999)**

All applications must contain a single, detailed Statement of Project Objectives that addresses how the project objectives will be met. The Statement of Project Objectives must contain a clear, concise description of all activities to be completed during project performance and follow the structure discussed below.

Applicants shall prepare the Statement of Project Objectives in the following format:

### TITLE OF WORK TO BE PERFORMED

(Insert title of work to be performed. Be concise and descriptive.)

#### **A. OBJECTIVES**

Include one paragraph on the overall objective(s) of the work. Also, include objective(s) for each phase of the work.

#### **B. SCOPE OF WORK**

This section should not exceed one-half page and should summarize the effort and approach to achieve the objective(s) of the work for each Phase.

#### **C. TASKS TO BE PERFORMED**

Tasks, concisely written, should be provided in a logical sequence and should be divided into the phases of the project. This section provides a brief summary of the planned approach to this project.

##### **PHASE I**

##### **Task 1.0 (Title)**

(Description)



Subtask 1.1 (Optional)

(Description)

Task 2.0 - (Title)

PHASE II (Optional)

Task 3.0 - (Title)

**D. DELIVERABLES**

The periodic, topical, and final reports shall be submitted in accordance with the attached "Federal Assistance Reporting Checklist" and the instructions accompanying the checklist.

The Recipient shall provide a list of deliverables other than those identified on the "Federal Assistance Reporting Checklist" that will be delivered. These reports shall also be identified within the text of the Statement of Project Objectives.

1. Task 1.1 - (Report Description)
2. Task 2.2 - (Report Description)

**E. BRIEFINGS/TECHNICAL PRESENTATIONS (If applicable)**

1. The Recipient shall prepare detailed briefings for presentation to the COR at the COR's facility located in Pittsburgh, PA or Morgantown, WV. Briefings shall be given by the Contractor to explain the plans, progress, and results of the technical effort.

2. The Recipient shall provide and present a technical paper(s) at the DOE/NETL Annual Contractor's Review Meeting to be held at the NETL facility located in Pittsburgh, PA or Morgantown, WV.

**6.8 TECHNICAL EXCEPTIONS AND DEVIATIONS (JULY 1999)**

This section shall identify and explain any exceptions or deviations taken or conditional assumptions made with respect to the technical requirements of the solicitation.

Any exceptions taken must contain sufficient amplification and justification to permit evaluation. All benefits to the Government shall be explained for each exception taken. Such exceptions will not, of themselves, automatically cause an application to be termed unacceptable. However, a large number of exceptions, or one or more significant exceptions not providing benefit to the Government may result in rejection of the application(s) as unacceptable.

## **SECTION VII -- EVALUATION AND SELECTION**

### **7.1 INTRODUCTION (DEC 1999)**

This section of the solicitation presents to the applicant the actual evaluation scheme, as well as the individual criterion used by DOE to evaluate the application.

### **7.2 GENERAL (JULY 1999)**

It is the policy of DOE that any financial assistance be awarded through a merit-based selection process which means a thorough, consistent and independent examination of applications based on pre-established criteria by persons knowledgeable in the field of the proposed project.

### **7.3 PRELIMINARY EVALUATION (AUG 1999)**

Prior to a comprehensive evaluation, applications will undergo an initial review to determine whether the information required by the solicitation has been submitted and is properly completed. Applications will be reviewed for relevance to the "Biomass Cofiring" program and for responsiveness to the technical requirements of the solicitation. Applications that require cost-sharing will be reviewed to insure that this requirement has been met. Volume I of the application will be reviewed to assess the Applicant's eligibility under the lobbying, EAct and Simpson-Craig Amendment requirements. Failure to successfully meet any one of these Preliminary Evaluation criteria will result in the elimination of the application and no further consideration in the Comprehensive Evaluation. In the event that an application is eliminated, a notice will be sent to the Applicant stating the reason(s) that the application will not be considered for financial assistance under this solicitation.

### **7.4 COMPREHENSIVE EVALUATION (AUG 1999)**

Applications passing the preliminary evaluation shall be subject to a comprehensive evaluation in accordance with the technical evaluation criteria listed in this section.

The technical evaluation is conducted to determine the merits of the technical application with regard to the potential success of the project as well as future commercial applications. Comprehensive evaluation results in a numerical score for each application against each of the technical evaluation criteria.

The Environmental, Health, Safety, and Security (EHSS) Evaluation, which is not point scored, is conducted to determine the completeness of the Environmental Questionnaire, and to assess the applicant's awareness of EHSS requirements for mitigating project related EHSS risks and impacts.

The cost evaluation, which is not point scored, is conducted to determine the completeness of the cost estimate, appropriateness and reasonableness of the cost, and to assess the applicant's understanding of the Statement of Project Objectives.

### **7.5 TECHNICAL EVALUATION CRITERIA (AUG 1999)**

Technical applications submitted in response to this solicitation will be evaluated and scored in accordance with the criteria listed below:

#### **Criterion 1 (25 points): Project Background/Discussion/Understanding**

Clarity of the discussion and understanding of pertinent issues related to the project including the technical, environmental, economic, and fuel availability along with the project's ability to adapt to alternative fuels.

#### **Criterion 2 (30 points): Merits of Proposed Activity**

Adequacy of the proposed approach for identifying potential energy, environmental, economic, and infrastructure benefits and impacts of the project and the opportunities for project replication and sustainability.

#### **Criterion 3 (30 points): Approach to Achieving Objectives of Topic Area**

Quality, appropriateness, and realism of proposed statement of work, work breakdown structure, milestone schedule, diagrams and detailed project description of both phases if applicable.

#### **Criterion 4 (15 points): Applicant and Participant Roles, Capabilities and Organization, and Facilities**

Adequacy of the team's ability to manage the project and the corporate commitment identified.

## **7.6 COST EVALUATION CRITERIA (JULY 1999)**

The costs proposed will be evaluated in response to this solicitation in order to:

- (a) determine the level of verifiable cost sharing;
- (b) ensure that all work elements included in the Statement of Project Objectives have associated costs, and that those cost appear appropriate and reasonable for the effort proposed; and
- (c) assess the applicant's understanding of the Statement of Project Objectives.

## **7.7 RELATIVE ORDER OF IMPORTANCE OF EVALUATION CRITERIA (JULY 1999)**

The evaluation of the technical application will be conducted using preestablished weights to determine the relative merits of the application in accordance with the technical evaluation criteria. The technical evaluation (Volume II - Technical Application) represents 100% of the total evaluation scoring. Although Volume I - Business and Financial Application will not be point scored it will be considered in the selection decision and must be addressed.

The following weighting factors will be applied to each technical evaluation criteria to obtain a final evaluation rating for each application.

<b>Criterion 1:</b> Project Background/Discussion/Understanding .....	25 points
<b>Criterion 2:</b> Merits of Proposed Activity .....	30 points
<b>Criterion 3:</b> Approach to Achieving Objectives of Topic Area .....	30 points
<b>Criterion 4:</b> Applicant and Participant Roles, Capabilities and Organization, and Facilities Adequacy of the team's ability to manage the project and the corporate commitment identified. . .	15 points

## **7.8 APPLICATION OF PROGRAM POLICY FACTORS (JULY 1999)**

These factors, while not indicators of the Applicant's merit, e.g., technical excellence, cost, proposer's ability, etc., may be essential to the process of selecting the application(s) that, individually or collectively, will best achieve the program objectives. Such factors are often beyond the control of the Applicant. Applicants should recognize that some very good applications may not receive an award because they do not fit within a mix of projects which maximizes the probability of achieving the DOE's overall research and development objectives. Therefore, the following Program Policy Factors may be used by the Source Selection Official to assist in determining which of the ranked application(s) shall receive DOE funding support.

1. It may be desirable to select a project(s) for award of less technical merit than another project(s), if such a selection will optimize use of available funds by allowing more projects to be supported while not being detrimental to the overall objectives of the program.
2. The desirability of selecting projects that collectively represents a diversity of geographic locations.
3. The desirability of selecting projects that collectively represent diverse types and sizes of proposing organizations.
4. It may be desirable to select a project(s) for award that represents a diversity of technology concepts and applications, as well as technical approaches. A balance of the technology portfolio for the program will be considered.
5. Level of cost sharing above the minimum requirement, and type of cost sharing (e.g., cash is preferred to in-kind).
6. Results of the evaluation conducted by DOE on the Business Volume of each application (e.g., completeness of volume and information).

The above factors will be independently considered by the Source Selection Official in determining the optimum mix of applications that will be selected for support. These policy factors will provide the Source Selection Official with the capability of developing, from the competitive solicitation, a broad involvement of organizations and organizational ideas, which both enhance the overall technology research effort and upgrade the program content to meet the goals of the DOE.

## **7.9 BASIS FOR SELECTION AND AWARD (AUG 1999)**

The Department of Energy anticipates the award of one or more financial assistance instruments to those applicants whose applications are determined to be in the best interest of the Department in achieving the program objectives set forth in this solicitation. Selection of an application by the Department will be achieved through a process of evaluating and comparing the relative merits of the applicant's complete applications, in accordance with all of the evaluation factors set forth in this section and applying the Program Policy Factors.

This process reflects the Department's desire to accept an application based on its potential in best achieving program objectives, rather than solely on evaluated technical merit or cost. Accordingly, the Department of Energy may select for an award all, none, or any number or part, of an application, based on its decision as to which meritorious applications best achieve the program objectives set forth in this solicitation.

It is important for applicants to note that selection for negotiations will be made entirely on the basis of applications submitted. Applications should, therefore, address specifically the factors mentioned in the evaluation criteria, and not depend upon reviewers' background knowledge.

## **APPENDICES**

Appendix A - Intent to Propose

Appendix B - Business and Financial Application Proposal Cover Sheet (2 pages)

Appendix C - Technical Application Proposal Cover Sheet

APPENDIX A

PROGRAM SOLICITATION DE-PS26-00NT40775  
BIOMASS COFIRING OPPORTUNITIES

INTENTION TO PROPOSE

OFFERORS ARE REQUESTED TO COMPLETE THE ENTRIES BELOW, AND DETACH AND RETURN THIS PAGE BY THE EARLIEST PRACTICAL DATE. THIS WILL ENABLE THE DOE TO MAKE NECESSARY ARRANGEMENTS FOR PROPOSAL EVALUATIONS.

=====

WE (CHECK ONE)

☐ DO INTEND TO SUBMIT A PROPOSAL

☐ DO NOT INTEND TO SUBMIT A PROPOSAL FOR THE FOLLOWING REASONS:

SELECT TOPIC OF INTEREST:

CFDA: 81.079 - Biomass Energy Technology

☐ Topic A-Biomass Cofiring as an Emission Reduction Technique

☐ Topic B-Gasification-Based Cofiring Strategies

☐ Topic C-Closed-Loop Biomass Cofiring

☐ Topic D- Low Rank Coal Cofiring - Subbituminous & Lignite

☐ Topic E- University and Colleges Cofiring Applications

COMPANY NAME:

\_\_\_\_\_

AUTHORIZED SIGNATURE:

\_\_\_\_\_

[TYPED OR PRINTED]

NAME AND TITLE:

\_\_\_\_\_

DATE:

\_\_\_\_\_

=====

RETURN THIS PAGE BY MAIL, FAX OR E-MAIL TO:

U.S. DEPARTMENT OF ENERGY  
FEDERAL ENERGY TECHNOLOGY CENTER  
ACQUISITION AND ASSISTANCE DIVISION  
P. O. BOX 10940, MS 921-107  
PITTSBURGH, PENNSYLVANIA 15236-0940

ATTN.: DONA G. SHEEHAN  
PRDA NO. DE-PS26-00NT40775  
FAX: (412) 386-6137

E-MAIL: sheehan@netl.doe.gov

PROPOSAL COVER SHEET/CERTIFICATION

PROJECT TITLE:

SELECT TOPIC OF INTEREST:

CFDA: 81.079 - Biomass Energy Technology

- ☐ Topic A-Biomass Cofiring as an Emission Reduction Technique  
☐ Topic B-Gasification-Based Cofiring Strategies  
☐ Topic C-Closed-Loop Biomass Cofiring  
☐ Topic D- Low Rank Coal Cofiring - Subbituminous & Lignite  
☐ Topic E- University and Colleges Cofiring Applications

Prime Contractor Business Type (check one)

- ☐ Small Business      ☐ Non Profit Organization      ☐ State/Local Government  
☐ Educational Institution      ☐ Large Business      ☐ Other \_\_\_\_\_

Name/Address of Submitting Organization

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Point of Contact: \_\_\_\_\_

Position Title: \_\_\_\_\_

Area code/telephone No.: \_\_\_\_\_

fax No.: \_\_\_\_\_

Internet address: \_\_\_\_\_

CONGRESSIONAL DISTRICT: \_\_\_\_\_

COUNTY: \_\_\_\_\_

DUNS NUMBER: (mos.) \_\_\_\_\_

TAX IDENTIFICATION NO: \_\_\_\_\_

Name of Project Manager: \_\_\_\_\_

Position Title: \_\_\_\_\_

Area code/telephone No.: \_\_\_\_\_

fax No.: \_\_\_\_\_

Internet address: \_\_\_\_\_

Proposed Duration: (mos) \_\_\_\_\_

Budget Period I:(mos) \_\_\_\_\_

Budget Period II:(mos) \_\_\_\_\_

DOE Share of BP I: \$ _____	% DOE Share of BP I: _____	\$ _____	% _____
Recipient Share of BP I: \$ _____	% Recipient Share of BP I: _____	\$ _____	% _____
Total: \$ _____	% Total: _____	\$ _____	% _____

Total Project Value: \$ \_\_\_\_\_

REQUESTED STARTING DATE: 2000

- PROPRIETARY INFORMATION: Does this volume contain proprietary or business confidential information (Check One)? ☐ YES ☐ NO  
If your answer is YES, complete the "Notice of Restrictions on Disclosure and Use of Data" below:

NOTICE RESTRICTION ON DISCLOSURE AND USE OF DATA

"This proposal, Volume \_\_\_\_\_, includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part-- for any purpose other than to evaluate this proposal or quotation. If, however, a contract is awarded to this offeror or quoter as a result of, or in connection with the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets \_\_\_\_\_."

(insert applicable page numbers)

In addition, each page of the proposal containing proprietary data shall be marked with the following legend:

"Use or disclosure of data contained on lines specifically identified by asterisk (\*) are subject to the restriction on the cover page of this proposal."

### Cost Sharing Certification

I, the undersigned authorized representative for \_\_\_\_\_, (name of organization)  
for the proposal entitled: " \_\_\_\_\_" now being submitted to the U.S.  
Department of Energy for award pursuant to Program Solicitation, DE-PS26-00NT40775, do  
hereby agree to provide a minimum cost share of 20% allowable project costs for Budget Period I and  
50% allowable project costs for Budget Period II, in accordance with the provisions of this solicitation.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name (Typed): \_\_\_\_\_

Title (Authorized Official): \_\_\_\_\_

**The proposal must be signed by a corporate or company official of the proposing organization who is authorized to legally bind the organization to the performance of the ensuing contract award in its entirety.**

**The DOE has no obligation to further review the proposal if this cost-sharing certification is not completed and signed by an authorized official of the proposing organization.**



PROPOSAL COVER SHEET/CERTIFICATION

PROJECT TITLE:

SELECT TOPIC OF INTEREST:

CFDA: 81.079 - Biomass Energy Technology

- ☐ Topic A-Biomass Cofiring as an Emission Reduction Technique  
☐ Topic B-Gasification-Based Cofiring Strategies  
☐ Topic C-Closed-Loop Biomass Cofiring  
☐ Topic D- Low Rank Coal Cofiring - Subbituminous & Lignite  
☐ Topic E- University and Colleges Cofiring Applications

Prime Contractor Business Type (check one)

- ☐ Small Business      ☐ Non Profit Organization      ☐ State/Local Government  
☐ Educational Institution      ☐ Large Business      ☐ Other \_\_\_\_\_

Name/Address of Submitting Organization

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Point of Contact: \_\_\_\_\_

Position Title: \_\_\_\_\_  
Area code/telephone No.: \_\_\_\_\_  
fax No.: \_\_\_\_\_  
Internet address: \_\_\_\_\_

CONGRESSIONAL DISTRICT: \_\_\_\_\_

COUNTY: \_\_\_\_\_

DUNS NUMBER: (mos.) \_\_\_\_\_

TAX IDENTIFICATION NO: \_\_\_\_\_

Name of Project Manager: \_\_\_\_\_

Position Title: \_\_\_\_\_  
Area code/telephone No.: \_\_\_\_\_  
fax No.: \_\_\_\_\_  
Internet address: \_\_\_\_\_

Proposed Duration: (mos) \_\_\_\_\_

Budget Period I:(mos) \_\_\_\_\_

Budget Period II:(mos) \_\_\_\_\_

REQUESTED STARTING DATE:

2000

Application Date: \_\_\_\_\_

- **PROPRIETARY INFORMATION:** Does this volume contain proprietary or business confidential information (Check One)? ☐ YES ☐ NO  
If your answer is YES, complete the "Notice of Restrictions on Disclosure and Use of Data" below:

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(insert applicable page numbers)

**In addition, each page of the proposal containing proprietary data shall be marked with the following legend:**

"Use or disclosure of data contained on lines specifically identified by asterisk (\*) are subject to the restriction on the cover page of this proposal."